

2003 - 2004

# Prairie State Achievement Examination



## OVERVIEW and PREPARATION GUIDE for PSAE Day 2

**Illinois State Board of Education**

**Making Illinois Schools *Second to None***

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Initialisms

PSAE – Prairie State Achievement Examination

ISBE – Illinois State Board of Education

# **Overview**

## **Prairie State Achievement Examination**



# **Prairie State Achievement Examination**

## **An Overview for Students**

The Illinois State Board of Education (ISBE) provides this booklet to help you prepare for the Prairie State Achievement Examination (PSAE). Part I of this booklet is an overview that answers some basic questions about the PSAE: What is it? What will it cover? When will it be given? Part II is a preparation guide for the five tests that you will take on Day 2 of the PSAE. Earlier this year, ACT sent copies of the Day 1 preparation guide (*Preparing for the ACT Assessment*®) to schools for distribution to students.

### **What is the Prairie State Achievement Examination, or PSAE?**

The PSAE is the statewide high school achievement test for grade 11 students. It is the only statewide academic assessment that Illinois law requires public high school students to take.

### **What subjects does the PSAE test?**

The PSAE tests five academic subjects: reading, writing, mathematics, science, and social science.

### **When will I take the PSAE?**

You will take the PSAE as a grade 11 student on April 28 and 29, 2004, the fourth Wednesday and Thursday of April. For students who are not in school on one or both of these test dates, makeup tests are given two weeks later on May 12 and 13.

You may choose to retake the PSAE in October of your grade 12 year if you wish to raise your PSAE scores.

### **What is the purpose of the PSAE?**

The PSAE measures your academic achievement with respect to the Illinois Learning Standards and determines whether you will receive recognition for excellent performance. PSAE results also show the progress that schools and the state have made toward meeting the Standards.

### **What are the Illinois Learning Standards?**

The Illinois Learning Standards are statements of the specific knowledge and skills that every public school student should learn in school. Thousands of Illinois citizens—teachers, parents, school administrators, employers, community leaders, and representatives of higher education—identified what they believe you will need to know and be able to do after you graduate from high school.

Whether you intend to go directly to a job or plan to attend a vocational or technical school, junior college, or four-year college, you will have the academic background you will need to compete successfully if you meet the Illinois Learning Standards. The Standards cover English language arts (reading and writing), mathematics, science, and social science—all of which are tested on the PSAE. There are also Standards for physical development and health, fine arts, and foreign language.

## **Where can I find more information about the Illinois Learning Standards?**

To read more about the Standards visit the Web site maintained by the Illinois State Board of Education (ISBE) at [www.isbe.net/ils/](http://www.isbe.net/ils/).

## **What tests will I take on each day of PSAE testing?**

You will take the ACT Assessment on Day 1. The ACT Assessment consists of tests in four subjects: English, mathematics, reading, and science.

On Day 2, you will take three tests developed by ISBE in collaboration with its test-development contractors and Illinois teachers and two ACT-developed WorkKeys® tests. The ISBE-developed tests are in writing, science, and social science. The WorkKeys tests are in reading and mathematics.

## **Why does the PSAE include different kinds of tests?**

The PSAE was designed to measure progress toward meeting the Illinois Learning Standards and also to provide students with broad achievement information. For these reasons, ISBE included tests that measure the Illinois Learning Standards and that also provide a measure of workplace skills and readiness for college.

The ACT Assessment includes four tests that measure what you have learned in English, mathematics, reading, and science, four of the five academic areas included on the PSAE. The two WorkKeys tests add depth and breadth; they address the “Applications of Learning” that are part of the Standards for every academic area, and they increase the range of skills in reading and mathematics that are assessed. Complete coverage of the Standards is accomplished by the inclusion of ISBE-developed tests in writing, science, and social science.

Except for social science, your PSAE score for each subject will be based on two of the three kinds of tests that make up the PSAE. For example, PSAE writing consists of ACT Assessment English (which measures how well you have mastered writing conventions and editing skills) and the ISBE-developed writing prompt (which allows you to demonstrate your ability to write an essay). The charts on pages 8 and 9 show how the tests that make up the PSAE fit together to assess each subject.

## **Why are WorkKeys tests included on the PSAE?**

ISBE decided to incorporate two WorkKeys tests, *Reading for Information* and *Applied Mathematics*, into the PSAE for three reasons:



- (1) WorkKeys tests assess whether you can apply what you have learned in the classroom to non-classroom situations, as required by the “Applications of Learning” sections of the Illinois Learning Standards.
- (2) WorkKeys tests give you a set of scores that you can use to identify the workplace skills you already have and those you need to acquire.
- (3) WorkKeys scores are used by many employers at large companies as part of the process of determining whether a job applicant is suited for a particular job, just as the ACT Assessment is used by college officials as part of the college admissions process. You may include your WorkKeys scores in your portfolio and present them when you seek employment.

## **How and when will I receive my PSAE scores?**

In August, principals will receive score cards with PSAE results for individual students printed on them. Schools are responsible for promptly distributing these to students, so they have time to determine if they want to participate in the PSAE grade 12 retake in October. You will receive a score for each PSAE subject.

Later in the summer, schools will receive the official PSAE score reports for individual students. A copy of the individual student report format is available on the Web at [www.isbe.net/assessment/psae.htm](http://www.isbe.net/assessment/psae.htm). In addition to your PSAE score report, you will receive an ACT Assessment score report and a score report for each of the two WorkKeys tests. ACT will mail your ACT Assessment score report to your home address in May or June. The WorkKeys *Reading for Information* and *Applied Mathematics* score reports will be sent to schools about the same time as the PSAE score reports.

## **Will the PSAE scores become part of my school transcript?**

Your best PSAE score in each subject (from either grade 11 testing or the grade 12 retake) will appear on your transcript, and the subjects in which you earned a Prairie State Achievement Award will be indicated.

## **What is a Prairie State Achievement Award?**

A Prairie State Achievement Award is special recognition given for excellent performance. You will earn an award for every PSAE subject in which your score is at the Exceeds Standards level. (There is no score or award for the PSAE as a whole.) Each award you receive will be noted on your transcript, and you will receive a certificate showing the subjects in which you received an award. Certificates will be sent to your school in February of your senior year.

## **Will I have a chance to improve my PSAE scores?**

You may retake the PSAE in late October of your senior year to improve your PSAE scores. If you decide to retest you must take the *entire PSAE*; only the higher PSAE score you earn in each subject will be included on your transcript. Day 1, the ACT Assessment, will be given on the ACT October national test date at an established national ACT test center; Day 2 will be given the

following week at your school. You must take both Day 1 and Day 2. Around the time you receive your scores from the spring PSAE administration, your school will provide information about how to register for the grade 12 retake.

## **Will I receive ACT Assessment scores that I can use when I apply to colleges?**

Yes. You can send the ACT Assessment scores that you receive from PSAE testing to colleges of your choice, just as you can send ACT Assessment scores from national testing. You may choose to have your scores sent to up to four colleges at no cost to you. You will be given information about how to have your test scores sent to additional colleges when you receive your ACT Assessment scores. ACT will mail your score report to your home address in May or June.

## **Are state-administered ACT Assessment scores accepted by colleges and the Illinois Student Assistance Commission (ISAC)?**

Yes. Colleges and universities throughout the United States and ISAC have indicated their willingness to use ACT Assessment scores reported from state testing. (Note: The U.S. Air Force Academy and Air Force ROTC are exceptions; they do not accept state-administered ACT Assessment scores because of athletic eligibility requirements.)

## **Are state-administered ACT Assessment scores accepted by the National Collegiate Athletic Association (NCAA)?**

No. ISBE asked the NCAA to consider allowing state ACT Assessment scores to be used for initial eligibility, but the NCAA has declined to change its eligibility rules.

## **Should students with disabilities take the PSAE?**

Students with disabilities should take the PSAE unless they have an Individualized Education Program (IEP) that identifies regular state testing as inappropriate for them, even with accommodations. Decisions about participation and any need for accommodations that students with disabilities may have are made on an individual basis by each student's IEP team.

## **Should students in state-approved bilingual education programs take the PSAE?**

Students in these programs should take the PSAE unless their lack of English proficiency would keep them from understanding the PSAE.

## What is the test administration schedule?

### Day 1

*Wednesday,  
April 28, 2004*

ACT English – 45 minutes (75 questions)  
ACT Mathematics – 60 minutes (60 questions)  
*[15-minute break]*  
ACT Reading – 35 minutes (40 questions)  
ACT Science – 35 minutes (40 questions)

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### Day 2

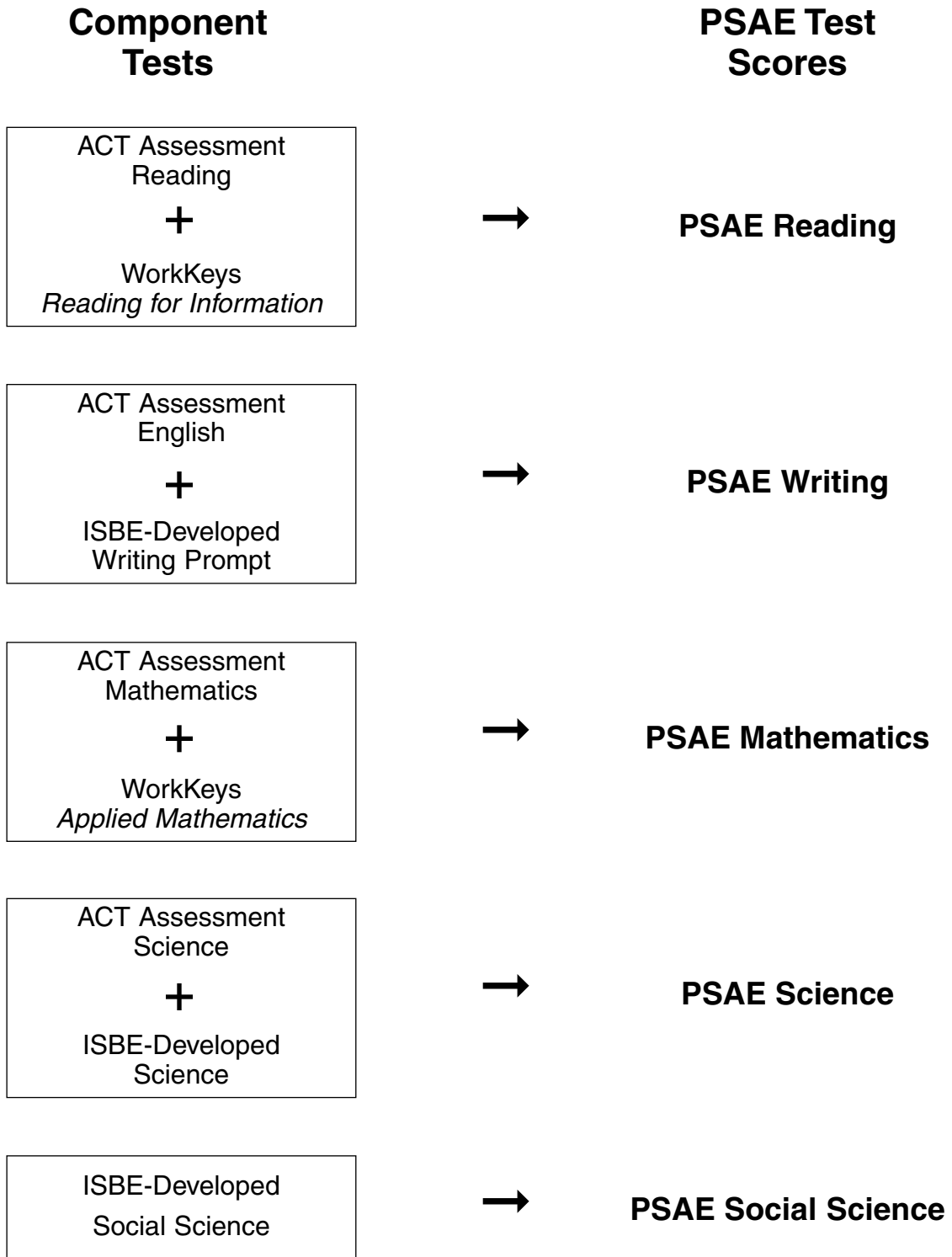
*Thursday,  
April 29, 2004*

ISBE-Developed Writing – 40 minutes (one prompt)  
ISBE-Developed Science – 40 minutes (45 questions)  
*[15-minute break]*  
WorkKeys *Applied Mathematics* – 45 minutes (33 questions)  
WorkKeys *Reading for Information* – 45 minutes (33 questions)  
*[15- to 60-minute break as determined  
by your school administration]*  
ISBE-Developed Social Science – 60 minutes (65 questions)

### Note:

*Makeup testing for students who are not in school on one or both of these test dates (April 28 and 29) will follow this schedule and be administered on May 12 (Day 1) and May 13 (Day 2).*

# PSAE Test Results



# Description of the Prairie State Achievement Examination

PSAE Test Scores	Component Tests	Description of Component Tests
<p><b>PSAE Reading</b></p>	<p><i>ACT Reading</i> (35 minutes, 40 multiple-choice questions)</p> <p><i>WorkKeys Reading for Information</i> (45 minutes, 33 multiple-choice questions)</p>	<p>ACT Assessment reading includes four 750-word passages. Each passage is followed by 10 multiple-choice questions. Two of the passages are literary texts (one fiction and one nonfiction). The other two passages are informational texts (one social science and one natural science).</p> <p><i>Reading for Information</i> includes 15 reading samples that range in length from about 50 up to 300 words. Each sample is followed by one, two, or three multiple-choice questions. The samples are arranged in order of increasing difficulty.</p>
<p><b>PSAE Writing</b></p>	<p><i>ACT English</i> (45 minutes, 75 multiple-choice questions)</p> <p><i>ISBE-Developed Writing</i> (40 minutes, one prompt)</p>	<p>ACT Assessment English measures two aspects of standard written English: (1) conventions, including punctuation, grammar and usage, and sentence structure [40 questions] and (2) rhetorical skills, including strategy, organization, and style [35 questions]. The test includes five prose passages, each followed by several multiple-choice questions. Different types of passages are included so that a variety of skills are assessed.</p> <p>For the writing sample, test takers will write to a single prompt that will ask for either an expository or persuasive response. The writing response will be scored using the high school writing rubric, which is included following the annotated sample papers in the next section of this booklet.</p>
<p><b>PSAE Mathematics</b></p>	<p><i>ACT Mathematics</i> (60 minutes, 60 multiple-choice questions)</p> <p><i>WorkKeys Applied Mathematics</i> (45 minutes, 33 multiple-choice questions)</p>	<p>ACT Assessment mathematics questions require the use of reasoning skills to solve practical problems in mathematics in six areas: pre-algebra, elementary algebra, intermediate algebra, coordinate geometry, plane geometry, and trigonometry. Certain types of calculators may be used; see page 4 of <i>Preparing for the ACT Assessment</i> for more information.</p> <p><i>Applied Mathematics</i> measures a student's skill in using mathematical reasoning to solve work-related problems. Test takers set up and solve problems like those that occur in a workplace. A calculator may be used, and a formula sheet is provided. The questions are arranged in five levels of increasing difficulty. ACT recommends the use of a calculator; see pages 66–67 of this booklet for more information.</p>
<p><b>PSAE Science</b></p>	<p><i>ACT Science</i> (35 minutes, 40 multiple-choice questions)</p> <p><i>ISBE-Developed Science</i> (40 minutes, 45 multiple-choice questions)</p>	<p>ACT Assessment science presents seven sets of scientific information in the form of reading passages and data summaries. Each is followed by a series of multiple-choice questions. The content includes biology, chemistry, physics, and Earth and space sciences.</p> <p>The ISBE-developed science questions present scientific information in the form of data summaries and short passages. Each is typically followed by one multiple-choice question. Questions are distributed equally across life sciences, physical sciences, Earth and space sciences, and science, technology, and society.</p>
<p><b>PSAE Social Science</b></p>	<p><i>ISBE-Developed Social Science</i> (60 minutes, 65 multiple-choice questions)</p>	<p>Social science questions include the social science disciplines (political systems, economic systems, and social systems), geography, and U.S. and world history.</p>



# **Preparation Guide**

**PSAE Day 2**





# **ISBE-Developed Writing**

**Sample Writing Prompt**  
**Sample Annotated Papers**  
**Persuasive/Expository Guidelines for Scoring**  
**High School Writing Rubric for Students**



# ISBE-Developed Writing Assessment

You will take the ISBE-developed writing assessment on Day 2 of the PSAE. It will consist of one persuasive or expository prompt. You will have 40 minutes to complete your writing response.

The following pages contain ten scored responses that were written by grade 11 students during a previous administration of the PSAE. The persuasive prompt to which these papers were written is shown below. The annotated papers on pages 16–35 show well-developed, somewhat-developed, and less-than-developed responses to the prompt.

These samples illustrate the level of writing that is expected of grade 11 students based on the high school writing rubric, which

is the set of guidelines that will be used to score your paper. The annotations that accompany the papers explain the scores and give some suggestions about how the papers might be improved.

Keep in mind that the samples are not models for you to copy exactly. The samples show only *some* of the possible approaches you can use. There are many ways to proceed with a writing assignment, and the rubric allows considerable flexibility.

To better understand how the papers were scored and how they could be improved, refer to the *High School Writing Rubric for Students*, which you will find on pages 38–39.

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## Sample Writing Prompt

### Persuasive Prompt

Change is generally considered either an improvement or a change for the worse. Most people resist changes because they feel the old ways are working, so changes are not necessary.

Write a persuasive paper presenting one change you feel is needed. Discuss a change that relates to your school, your community, the state, or the world. Include examples and evidence to support why the change is needed.

1. Take a few minutes to plan your paper by making notes.
2. Choose one change that you think is needed.
3. Give specific reasons that explain why this change is needed.
4. Organize your ideas carefully.
5. Check that you have correct sentences, punctuation, and spelling.

**See the following pages (16–35) for annotated papers written to the sample writing prompt above.**

## **Response 1 – Pudding Cups**

### **Focus 6**

- Initially the global reach of pudding consumption is established, lending credence to the shocking news that unbalanced pudding cups threaten to undermine civilization itself.
- This sophisticated opening of a well-controlled satire is followed by clear maintenance of the focus followed by a conclusion that unifies by projecting into the future [the world will be poor, hungry, and living in the streets] while echoing the introduction.

### **Support 6**

- Support is extensive and strengthened through effective use of multiple strategies [cause and effect, statistics, example, explanation], creating a convincing argument for the writer's position on pudding cups.
- Particularly apt and effective word choice [This vicious cycle has left many once thriving US cities in the gutters of poverty] helps strengthen support.

### **Organization 6**

- The reliance on causal linking provides tight cohesion in most body paragraphs, which also serves to strengthen coherence, although a better transition is needed in the third paragraph to link housing destruction with the depletion of pudding supplies.
- A variety of particularly effective and sophisticated syntactic structures provides concise and fluid idea-to-idea connection [The dilemma, with spoons outweighing empty pudding cups 2 or 3 to one, is that when finished, the empty cup falls to its side, creating more problems than it may appear to].

### **Conventions 2**

- This writer demonstrates a sophisticated understanding of the standards of written language.

### **Integration 6**

- The superior quality of all fundamental features indicates a fully developed response for grade 11.

### An Empty Pudding Cannot Stand

Pudding is a delicious snack enjoyed by different people all over the world, from the US, to Mexico, to China, to Japan; a universal food. So what happens when pudding cups across the globe are falling left and right? That is right, it's the end of civilization as we know it. Whether chocolate, vanilla, peach, vanilla, tepepoca or banana, the problem is the same. Pudding eaters often fancy a cup or two for the tranquility of their own home. Many times people use regular silverware like they would at a meal. The dilemma with spoons outweighing empty pudding cups 2 or 3 to one, is that when finished, the empty cup falls to its side creating more problems than it may appear to. It may make a mess, ruin furniture and tables, and create immense emotional distress. To avoid these disasters, small full-and plastic stands should be attached to each plastic pudding cup.

And pudding eaters across the map would agree that the biggest problem with today's pudding cups is that the empty cup buckles under the weight of the heavy spoon. School kids have the least problem, because plastic spoons are often used in sack lunches. The plastic spoon, lightweight as well as disposable is a good solution, but will not eliminate the problem. At home, the problem is devastating. Plastic spoons are not often used, and it is a place where spilled pudding can do the most damage. It has been researched that pudding cups fall over six times every minute across the globe. That number has risen to an alarming rate since 1987, which was 2 every minute. The problem is a food good. A great simple and inexpensive solution: small plastic stands.

To an everyday food a fallen pudding cup is no more than a small amount of pudding on a kitchen table, easy to wipe up, right? Wrong. Fallen pudding cups have destroyed countless homes by spilling pudding. In the past 3

years, over 7,000 homes have been destroyed by pudding stains and spills. Given that statistics have been made for pudding accident victims, when pudding is served on bowls, and you) this is simply not enough. Pudding supplies are being depleted at a surprising rate as well. If a pudding cup happens to fall over while someone is still eating, the pudding is ruined, and the eater must proceed to buy more. Jason Henry of Glen Ellyn, IL says, "This week alone I've gone through five six-packs of pudding, all because I just can't stay standing."

Ruined tables and furniture may not seem like a serious problem at first, but in fact it is far more serious than one may think. People use entire bottles of carpet cleaner, steam removers, etc. only to be left with the same stain as before. People throw out furniture every week, and as a result, the garbage collection, specifically in the US has been greatly backed up. Pudding eaters have to buy more and more furniture, and more and more cleaning supplies. Because of its great taste, they continue to buy pudding, and ruin furniture. This vicious cycle has left many once-thriving US cities in the gutter of poverty. As well as creating poverty for pudding eaters, many other businesses have gone bankrupt. The pudding companies, specifically Telle<sup>TM</sup>, has merged with furniture makers, and cleaning supply manufacturers, creating economic monopolies.

This problem has continued to grow every year. Before long, the US, as well as the world will be poor, hungry, and living on the streets, uneducated, and under control of pudding companies. Governments will be runned, only to be replaced with Pudding monarchs. If small plastic stands are made to fold out on the pudding cups, pudding will be saved as well as lives of millions of innocent pudding lovers.

## **Response 2 – Ethnic Education**

### **Focus 5**

- Before the specific preview that ends the introduction, the writer provides general comments that clearly set purpose, including a metaphor [time bomb] that helps establish the seriousness of the problem.
- The focus on changing the atmosphere at schools is clearly maintained, and the conclusion recaps and adds a new idea [not a step off into the dark unknown] that attempts to unify.
- However, a more sustained, effective, sophisticated strategy in the opening, as well as stronger unification in the conclusion, would be required to achieve a Focus score of 6.

### **Support 5**

- Support in the form of casual linking provides depth in the first body paragraph, an insightful discussion on the psychological roots of prejudice.
- Solid explanation and description with strong specificity is noted in the next section, which outlines the separation of groups [a handful of whites by a locker, a cluster of Hispanics on the steps] in an “average” high school.
- The final section on violence, elaborated using causal linking of abstract concepts, provides a cogent and real benefit of decreased tensions in schools.
- The response is marked by careful attention to word choice [patchwork quilt, intermingling, awareness crucial], and the cumulative effect paints a clearer picture of the psychological problems that form the basis of this response.

### **Organization 5**

- The causal linking described under Support provides a consistent tightness of cohesion, and the sequence of ideas addressed [education to bring awareness to bring change in school tension] also provides a clear progression forward, strengthening coherence.
- The unity provided by the preview and strong introduction and conclusion also contribute to creating a clear organization structure.

### **Conventions 2**

- This fluent writer clearly exhibits a strong command of Conventions.

### **Integration 5**

- Though more development would be required to achieve a higher score, this response represents overall a solidly developed response for grade 11.

The world is in a constant state of change. Some look at change as something to be feared, but in reality it is necessary to improve the quality of life. Schools need to make a curriculum change to include ethnic and racial education classes in schools. Currently, racial and ethnic ignorance is a time bomb waiting to explode. These educational classes would help bring awareness of the different groups of people, lessen the ethnic and racial division among students, and most importantly, make schools safer.

Educational classes would be able to make students aware of the different social groups surrounding them at school. Much of the dislike students have springs from ignorance toward the group or groups they hate. If, however, children had the opportunity to learn about and talk with a group they disliked, these ill feelings would be lessened. This principal could be applied to many groups such as gays, religious groups, blacks, and hispanics. Once a person learns that these people are not so different from themselves it makes it more difficult to hate them. These classes would bring awareness crucial to acceptance of others.

Not only would these educational classes bring awareness, they would also help lessen ethnic, racial, and social division among students. When one walks into the average American high school it tends to look somewhat like a patchwork quilt. A group of African Americans by the water fountain, a handful of whites by a locker, a cluster of hispanics sitting on the steps, and so forth. Barely does one see these groups intermingling. Classes on racial and ethnic acceptance would help bring all of these groups together, not as black <sup>and</sup> white, but as human being and human being.

Finally, and perhaps most importantly, these classes would

make America's schools a safer place. Recently there has been an outbreak of school tragedies such as Columbine. Often these violent acts have been committed by students who feel harassed by those around them, and generally not accepted by their peers. If educational classes were implemented, students would learn to both respect and accept those different from themselves. This would create less tension between groups of students, which would in turn lead to less fighting and violence in America's schools.

Every student deserves the respect of those around him and the ability to learn in a safe environment. Currently, however, this is not always happening, and thus things must change. One way to do this is by establishing racial and ethnic education classes. Change is not a step off into the dark unknown, it is a step upwards toward equality and acceptance for all.

## **Response 3 – Alternative Energy**

### **Focus 5**

- This student, after establishing the worldwide importance of gas-powered vehicles, goes on to narrow the focus to the creation of “an environmentally safe, pollution-free vehicle.”
- The subject and purpose are further delineated by the inclusion of a specific preview. Focus is maintained throughout, and the conclusion goes beyond restatement to provide a projection into the future: “over time a method will be found to make a new energy source affordable, available, and possible for everyone.”
- While this closure does provide unity, a more sophisticated opening would be needed to achieve a Focus score of 6.

### **Support 5**

- In-depth discussions of new-technology vehicles in juxtaposition with gas-powered vehicles demonstrate expected improvements based on cleanliness, cost, and noise abatement.
- Predominantly specific detail [methane, explosion, compression] strengthens the writer’s argument in favor of alternative fuels.
- More depth of support, however, would be required to move to a 6 in Support.

### **Organization 5**

- The comparison between old and new technologies strengthens coherence, which is further bolstered by a clearly followed preview and also tightens cohesion.
- Variety of syntax and a number of transitional devices, including logical interrelation of ideas [noise in every gasoline burning car. Electric vehicles are silent.] and causal linking further strengthen cohesion, contributing substantially to the creation of a clear organizational structure.

### **Conventions 2**

- The writer demonstrates a strong command of Conventions.

### **Integration 5**

- This is a solidly developed response.



### Alternative Energy Sources For Automobiles.

Almost every country in the world uses gas-powered vehicles as their main form of transportation. Cars, trucks, or vans are owned by almost every U.S. citizen. These vehicles are the main source of air pollution in the world today. I believe technology should be used to produce an environmentally safe, pollution free vehicle. A new energy source would make less air pollution, longer lasting vehicles, quieter streets, and make land travel more efficient.

Earlier tries have proved the production of an electric vehicle possible, but expensive. Gas burning cars leave methane and carbon deposits on streets and in the air we breathe. I believe that there is a way to simplify the production of electric or other non-polluting vehicles, making them available in car dealerships throughout the U.S. It would take a while, but over time the use of gasoline powered vehicles would decrease. Pollution would decrease, and the air would be cleaner.

Gasoline vehicles suffer heat from the friction in any automobile engine. All gas engines run by explosion, compression, power, and exhaust. The use of an engine in everyday life eventually decreases the performance of any car. A new energy source that depends on chemical reactions or a electric system would allow a car to run cooler and smoother, extending its life.

Anybody who has a neighbor that owns a pickup truck knows how loud gasoline vehicles can be. The constant cycle of compressions and explosions create noise in every gasoline burning car. Electric vehicles are silent. Running on a direct power source such as a battery of generation greatly reduces the friction in an electric motor. The result, a clean burning and quiet form of transportation.

The whole idea of new sources of energy, is efficient. Americans in the future may only have to plug their car into an electric socket before they go to bed. The next morning their car may be charged and ready to take them to work and back. If technology americans may be able to use a renewable source for energy such as water. Imagine filling your gas tank with water, being able to drive for a week, and leave nothing but steam in the atmosphere.

In conclusion, the creation of a new energy source would clean up our atmosphere, make strong and reliable automobiles, make our streets silent, and make a more efficient society. Scientists need to experiment on new ideas. I believe that over time a method will and can be found to make a new energy source affordable, available, and possible for anyone in the world.

## **Response 4 – Back in the Childhood Days of Parents**

### **Focus 6**

- By hearkening back to the childhood days of parents who trudged through the snow in the early morning, this writer establishes that rising early for school has been a perennial problem in need of change.
- The sophisticated introduction is followed by material clearly intended to persuade the reader of the efficacy of this plan to start school later in the morning.
- The conclusion goes beyond restatement to continue the discussion of walking through snow in light of the later start of the school day [wouldn't be as dramatic].

### **Support 4**

- Support begins in the well-developed introduction [struggled out of bed] and is continued in three body paragraphs that each add a mix of mostly specific [sleep pattern, annoying buzzing sound, regenerate] detail.
- Some depth is evident in the sections on waking up and the need for more rest, though the final discussion on mental effects is noticeably thinner.
- In total, sufficient evidence is presented for the response to reach the developed level in Support.

### **Organization 4**

- Strong coherence is derived from the effective introduction and conclusion as well as the specific preview that delineates an overall plan.
- Solid content linking [logical interrelation of ideas] as well as a variety of syntactic structures [see the third sentence of the introduction] that tightly control many ideas and provide strong cohesion.
- More depth of development would result in the more sustained, stronger demonstration of cohesion required to achieve a 5 in Organization.

### **Conventions 2**

- This fluent presentation indicates a strong control of Conventions.

### **Integration 4**

- Although the highest score, 6, is achieved in Focus, the lower scores of the other features leaves the Integration score at the 4 level.

### School Times

Back in the day of our parents walking through several feet of snow; I wonder, did they ever stop to think how late in the day? Parents and teachers seem to conveniently forget how difficult it is to wake up in the early hours of the morning to go to school. They, most likely, struggled out of bed - as we do, complained to their parents - as we do, and ended up falling asleep during first hour - also, as we do. My proposal is to begin starting school later in the day to help the youngsters of the millennium emotionally, physically, and most important, mentally.

Every day, an average teen wakes up at around six in the morning to prepare for a hard day's work. Waking up to an annoying buzzing sound blaring from a tiny alarm clock can't possibly place anyone in the best of moods. Interrupting a sleep pattern can affect the way a person acts throughout their day. Chubby teens could possibly be the worst teenagers at any point in your day. Also, to add to the daily drama a teen acts out they also complain about feeling sore and/or sluggish.

Intruding on resting is a harsh payment to give

a body that just spent a 12+ hour day working for you. The least we could do for ourselves physically is to allow ourselves to regenerate our bodies for another 12+ hour day. Waking up without a proper amount of sleep causes us to slow down making everything - math problem, gym class, walking up the stairs - harder to do and comprehend. Lack of rest most importantly affects us mentally. It's hard for adolescents to pay attention in the morning - they tend to fall off tasks or even fall asleep. How, someone supposed to excel in life educationally if they sleep through the first half of the school day.

In conclusion, if schools switch around schedules, so students don't start school until at least nine o'clock; I, myself, would not be the least surprised, if students came to school in better moods, more physically active, and more mentally alert. Also, this terror stories of walking through several feet of snow would not be as dramatic once the snow would be partially melted from a new days sun.

## **Response 5 – Grading System**

### **Focus 5**

- A brief attempt to engage the reader with the subject [rhetorical question] clearly sets the purpose but falls short of the sophistication and development required of a Focus score of 6.
- The specific preview, also present, is clearly carried out, and the conclusion moves beyond the restatement to synthesize and admonish [Students and teachers need to remember that learning is the important part and grades are not], creating a sense of unity.

### **Support 4**

- While the detail provided is a mix of general and specific, the general predominates.
- Each main idea has some depth, but the sections on competition and teachers remain general and are at times wordy.
- However, the discussion on the repercussions of a student's growing perception of failure is more abstract [cannot redeem himself, prepare you for the future] than general, the ideas gaining strength by virtue of their strong causal connection.

### **Organization 4**

- The connections create tight cohesion, but less precision in idea-to-idea connection is found in the other two body paragraphs, which are somewhat loosely constructed.
- More variety and precision in the use of transitional elements as well as more sophisticated syntax would contribute to a higher Organization score.

### **Conventions 2**

- Relatively free of errors, this response indicates a clearly adequate command of Conventions.

### **Integration 4**

- The scores for Organization and Support move the Integration score to a 4.

How would you like staying up all night worrying about a test or doing homework? You probably wouldn't enjoy it very much. This is part of the reason I feel that the grading system is a problem. Grading systems may present stress, high competition levels, a feeling of failure, and boredom. First, grading systems present much stress among students. Stress leads the student into many bad habits. Some students stay up very late at night studying or doing homework. Most of the time, when students don't get a lot of sleep, they tend to do worse. For the student, this causes even more stress. I feel that many students worry too much about their grades.

Next, grading systems are a problem because they create very high competition among students. Some students always yearn to be the best. This causes them to compete with others. Sometimes this competition turns very serious. Many students are pressured by their parents to do well in school. These students find themselves competing for the sole reason of meeting the expectations of their parents. A lot of times, many schools have students who are competing quite seriously for class ranks.

Also, grading systems often give the students a feeling of failure. If a student receives a low grade on a homework paper or on a test, they feel like they are a failure. Many times after receiving a low grade, a student feels like he cannot redeem himself or that no matter what he does, he can't do better.

This student may not continue trying to get high grades. Then, they will stop learning. Isn't the whole purpose of school to learn new things to prepare you for the future and expand your knowledge on certain subjects? If students stop learning, there would be absolutely no purpose of schools.

Finally, sometimes teachers get too involved in the grading system. If their students don't receive high grades, they feel like they haven't taught well enough. Many teachers are too busy trying to get students to get high grades they forget to try to make learning an enjoyable activity for students, because students will learn more if it is enjoyable. Often times, students are too bored to concentrate and get high grades.

In conclusion, grading systems are a problem. They create stress, high-competition levels, a feeling of failure, and boredom. All of these factors combined is a horrible problem. Students and teachers need to remember that learning is the important part and grades are not

## **Response 6 – Language Instruction**

### **Focus 5**

- This argument in favor of improving the study of foreign language in the United States is outlined in a specific preview [help in education, help in understanding a new culture, gain respect] that is clearly carried out.
- The conclusion goes beyond restatement to synthesize [English is a universal language] and attempt to unify [We live in the world together], completing the requirements for a Focus score of 5.

### **Support 4**

- Support begins with a personal anecdote comparing the German system of language instruction with the American system.
- This section provides some specific detail [75% to 90%] in explaining the advantages of the immersion method.
- Though some depth of development is provided, there is also some overlap of ideas between paragraphs two and four [everyone else in the world learns English], weakening support. In total, sufficient evidence is present to move this response to the developed level.

### **Organization 4**

- The overlap of ideas is clearly a weakness in coherence and functions in the second paragraph as a weakness in cohesion because the connection between expected universal English and poor instructional techniques is not clearly made.
- The comparison between teaching methods does provide a measure of coherence and cohesion as does appropriate, if not fluent, use of transitions [On the other hand].
- The second body paragraph is loosely constructed, with no real center, but the final section on respect demonstrates stronger cohesion.

### **Conventions 2**

- Generally correct, this response indicates a developed understanding of Conventions.

### **Integration 4**

- Though a lower 4 for Organization, the strength of other fundamental features clearly makes this response a 4 for Integration.

The world we live in, each and everyday makes many mistakes. One mistake that I have recently noticed is in the school. The language department in high schools all around the United States need to be improved. This would help in the education for the student, an understanding of a new culture, and Americans would gain more respect.

Recently, I was in Germany studying abroad. I attended a German "Gymnasium" (high school) and lived with a family who spoke all German. I had had 2 years of German in school already, so I thought I wouldn't have any problems. Another thing I thought was that every country outside of the USA learns English at an early age so I would be able to speak English. This is one thing that we take advantage of in the USA. My language department, as well as all of the other Americans that were with my organization, had taught us close to nothing. In a language class in USA, we speak anywhere from 10% - 20% of the class in the foreign language and the other 80% - 90% of the class is spoken in English. On the other hand, for example, in the German schools the English class is spoken all in English, and students are not allowed to speak German. This is a better way to learn the language - learning by doing.

I believe that it is good to have a second language if you are interested in history or the future of another country. With the right background of knowledge about the country, you understand better the reasons of why they do things differently. By learning a language in the

school, the students are allowed to speak the foreign language 4-5 times per week. Our schools in the USA do not prepare us for the college language courses or in my case, if you wanted to go to the foreign country. Another reason why I think the language courses in the United States should be improved is for the gain of respect. Many foreign countries believe the United States to be a wonderful country, but they also believe us to be lazy. When Americans travel into a non-English speaking country, they expect everyone to speak English to them. This portrays our school system and our way of life in a poor manner. When Americans try to speak the foreign language, even if it is not completely correct, people give you more respect and have patients. I believe when you are in their country they should not have to wear themselves out by speaking English to you, just to make things simpler for you.

The language department needs to be improved for so many ways. The United States needs to stop taking advantage of the fact that "English is the universal language" and start building up our schools and learning ability to look beyond the baracades of the United States of America. We live in this world together we should work together and respect one another to make of a better place.

## **Response 7 – Chicago Transit**

### **Focus 5**

- The likening of the CTA to a leech is effective, but though somewhat sophisticated, it is not sustained to the 6 level for Focus.
- The subject is maintained, and the conclusion provides solutions tied to problems named in the body and closes with a thought that synthesizes the effect of these positive changes on passengers [one might be able to actually enjoy a ride].

### **Support 4**

- The discussions of the poor cards given to commuters [pictures of Chicago's gorgeous skyline], the decrepit mechanical shape of the buses [in use since the '70's], and the difficulties of dealing with the weather [waited forty minutes in below zero degree weather] all provide some specificity and some depth.
- Greater depth of development, however, would be required for a score of 5 in Support.

### **Organization 4**

- Despite the lack of a preview, coherence is strengthened by the somewhat thematic nature [tourists, the purported villains, are the cause of commuter distress] of much of the response.
- The conclusion that ties solutions closely with problems also strengthens coherence.
- Cohesion is created through comparison, [tourist cards vs. everyday customer cards], content linking, syntactic variety, and other transitional devices, including pronoun reference [These buses].
- Though this paper is a high 4, it needs a stronger demonstration of coherence and cohesion to reach a score of 5.

### **Conventions 2**

- The Conventions are clearly in the developed range.

### **Integration 4**

- This Integration score follows the lead of the scores in Support and Organization.



In the city of Chicago, there is one thing that keeps us below the other major cities. One thing that keeps crawling up our back. One thing that is like a leech and sucks the life out of the city. This parasite is known as the Chicago Transit Authority.

The CTA is doing a very poor job of providing public transportation to the citizens who really use it: students, office workers, and everyday commuters. Instead, the CTA is trying to appeal to the tourists and sightseers of Chicago.

The new transit card system is an excellent example of the CTA's neglect toward their customers. Cards like the 7-day pass and 30-day pass were clearly designed for tourists, as they show pictures of Chicago's gorgeous skyline on them. The CTA neglects, however, their everyday customers by giving us poor paper cards that are easily lost.

The buses that service the CTA are some of the worst in the country. Some have been in use since the 1970's. These buses frequently break down and have terrible heating and cooling systems. Some even have leaks, for God's sake. Plus, these are the buses that the CTA routes to the city limits, while the few good buses are used downtown, again, accommodating tourists.

Another thing the CTA cannot deal with is weather. You don't know what cold is until you've waited forty minutes in below zero degree weather, with the wind and snow blasting in your face, all for a lazy donut-eating bus driver. The buses

and trains are just as bad in the rain. Maybe they figure that because the weather is bad, fewer people will be out waiting for the bus?

The CTA needs to get its act together if they ever want happier customers. They need to look at the real commuters. For instance, sending more trains and buses would make it a lot less crowded. Newer models for buses like the ones downtown should be put into service all over the city. Older buses should either be fixed and maintained better, or be sent to the scrapyard. Bus drivers need to learn to become more friendly with aggravated customers. More buses and trains should be used when the weather gets bad, not less. If the CTA were to act on all of even some of these goals, one might be able to actually enjoy a ride with the Chicago Transit Authority.

## **Response 8 – Government Spending**

### **Focus 3**

- By paraphrasing the prompt before providing a vague statement of subject [This country needs to make a lot of changes], the introduction for this paper fails to provide a clear enough statement of subject to reach the developed level for Focus, despite the strong conclusion that synthesizes and projects into the future where, ironically, “we’ll have to look to others for help.”

### **Support 4**

- Support consists predominantly of specific detail [renovating abandoned buildings, organize neighborhood watches] with some depth, particularly in the third paragraph.

### **Organization 5**

- The consistence with which the writer maintains the comparison of our current government spending with more sensible alternatives helps to provide an overall coherence to the response while providing idea-to-idea connection within paragraphs.
- Rhetorical questions and syntactic variety also strengthen cohesion, resulting in a clear, flowing organizational structure.

### **Conventions 2**

- A clearly developed understanding of Conventions is demonstrated here.

### **Integration 4**

- The strength of the Support and Organization features counterbalances the low Focus score so that Integration reaches the developed level.

Change is always good. When things change, it may not always seem good at the time, but as time goes on, you'll notice that eventually change turns out to be a good thing. I think this country needs to make a lot of changes, but I will only discuss one.

The major change the country needs to make is how we spend money. By that I mean, the "leaders" of the country need a serious reality check. How is it that our "great" country has money for wars, but they can't feed the poor? How is it that our country has money for hi-tech nuclear weapons, but can't get the homeless off the street? Why is it that our country sends our men and women to solve problems all across the world, but can't solve their own problems at home?

The answer is that they all need a reality check. The U.S. has money to fund wars, and they pay a lot to keep peace in other places. Instead of funding a war, fund raise a food drive for people who have none. Instead of trying to keep peace in other places, they should organize neighborhood watches, and try to keep these street gangs at peace. Instead of spending that million dollars on a nuclear weapon that will end up killing us all anyway, they should spend that million dollars renovating an abandoned building, or an old crack house, so the homeless can have someplace to live.

There are so many things that need attention in our country, but our great "leaders" always

turn their backs to help somebody else. I think it's time they need to change how they operate. For one I think they should take care of their own country first, and then if necessary help another country. It's not fair to the citizens of the U.S. to be put second. If some changes do not happen soon, then it will be too late to start. Maybe the politicians feel it's their duty to help others, which is all good, but you have to help your own first.

In conclusion, there are a lot of changes to be made, but the biggest change is how and what we spend our money on, because soon there will be no money, and we'll have to look to others for help, when we could have helped ourselves all along.

## **Response 9 – ID Chain**

### **Focus 4**

- The main problems with wearing ID's are enumerated in the specific preview [inconvenience, cost, detentions] that ends the introduction.
- These points are all touched on in the body, and the conclusion restates the main points without attempting to unify.

### **Support 3**

- The first point on the hassle of wearing ID's reaches a score of 3 by virtue of the breadth of support, while the other points add some detail but are thin.

### **Organization 3**

- Though some coherence is formed through the structure imposed by preview, cohesion is weak because many of the ideas presented are rearrangeable and the body paragraphs are quite brief.

### **Conventions 2**

- This response demonstrates a clear understanding of Conventions.

### **Integration 3**

- Despite a Focus score that reaches the developed level, the preponderance of evidence places the Integration score at the undeveloped level.

### Identification

One change that really needs to be considered in my school is the wearing of I.D.'s. I personally think the idea of wearing I.D.'s could be around your neck is ridiculous. The I.D.'s should be with you, but there is no need to wear them around your neck, they are an inconvenience. The school's policy is if you lose it, you have to buy another one. Many students receive detentions for not wearing them, I think that is too strict.

Wearing a long chain with an ID on it is quite a hassle. The ID's ruin your outfit and are a pain to keep track of. When you walk through the halls they are always bouncing against you and getting in the way.

If you lose your ID, you have to buy another one. I think it would be easier if we just kept them in our book bags. At a teacher wanted to see it, we would simply take it out and show them.

Early morning and after school detentions just for not wearing your I.D. Even if you have it with you, I think that is going too far.

Students also receive Res - all day detention or suspension for not wearing and/or having their I.D. This is a dumb reason for having a student miss classes and school.

The school's policy needs to be taken down. I.D.'s should be carried on a person, not around your neck. Even teachers find them to be an inconvenience. There should not be any punishments just for not having an ID around your neck, I find that ridiculous. I'm sure all the students would agree that no I.D.'s make school life easier.

## **Response 10 – Crowded Classrooms**

### **Focus 3**

- Though much of this opening merely parrots the prompt, the writer does go on to provide what can be considered a weak general introduction.
- The subject, classroom crowding, is maintained, and the conclusion even adds some attempt to unify [Maybe when my children...], both attributes of a higher Focus score.
- However, the repetition and wordiness indicate a response that is insufficient to reach the developed level for Focus.

### **Support 2**

- Support is thin as there is little indication of an ability to connect ideas and build depth.
- Repetition is particularly pronounced in the second paragraph where the phrase “lack of attention” is used several times.
- In addition, word choice is very general [broader amount of teachers], further weakening Support.

### **Organization 2**

- Repetition also affects Organization detrimentally as it impedes the creation of cohesion and creates a looseness in the progression of ideas.

### **Conventions 2**

- Despite a few minor problems at the word level [recieve, grateful for grateful] and some awkward syntax [Don't get me wrong], the writer displays an adequate command of written language.

### **Integration 3**

- The weakness in Support is counterbalanced by the other features, allowing the Integration score to move to the 3 level.

Throughout life, there are many changes that take place. In our schools, communities, state, and the world constant changes occur. Some changes are helpful and great where as others do not have a positive outcome. There are many changes I feel are needed, but my main point of discussion is crowded classrooms. I believe at our school along with schools around the world, there is an overload of students. With this overload of students, I do not believe that each and every student gets enough attention.

The topic of crowded schools has been in the news quite often lately. If nothing is done about this soon, the problem will only get worse. In school, a student needs the attention of the teacher in order to do well. With the overcrowded schools, each student receives a lack of attention. A lack of attention could result in many non-positive aspects. A drop in grades is just one of the many disadvantages that could result.

I myself believe that twenty or more students in a classroom with only one teacher is ridiculous. I feel very strongly that a change needs to go into effect. This change relates not only to me, but to

other students across the world whom think as I do. A broader amount of teachers would help this change very much.

If I could change something about the school system, it would definitely be the overcrowded classrooms. I believe very strongly about this, and hope one day my change will happen. Maybe when my children are in school, they will receive the amount of time and attention in which we do not.

Don't get me wrong, our teachers are great, but it would only be that much better. In the future, I would be grateful to see this change go into effect.

# Persuasive/Expository Guidelines for Scoring

## Types of Writing Assignments

The persuasive assignment requires students to take a position and develop one side of an argument. The expository assignment requires students to explain, interpret, or describe something based upon background experiences or information provided in the prompt.

## Basis for Scoring

Test papers are scored on the basis of how well they achieve the features of writing that make up an essay: Focus, Support, Organization, Conventions, and Integration.

## Features of Writing

Text-Level Features of Writing:

**Focus – the clarity with which a paper presents and maintains a clear main idea or point of view**

Focus is more than a thesis statement and/or a listing of subordinate points. This feature examines whether the subject/issue/position is clear and whether the central purpose is maintained throughout the paper. Multiple positions are focused only if there is an umbrella statement. The writer must maintain a clear position/logic throughout with an effective conclusion. Titles are not considered part of Focus.

**Support – the degree to which the main point or position is supported and explained by specific details and reasons**

Support focuses on the quality of the detail or support illustrating or explaining the reasons and subpoints. The quality of Support depends on its specificity, depth, accuracy or credibility within the writer's framework, and sufficiency. Depth can be detected by outlining or diagramming the details. The more subtopics or branches, the greater the depth. There is no required number of supporting points; depth of detail is required for more developed papers. The most developed Support is balanced across all points. Word choice enhances specificity.

**Organization – the extent to which ideas flow logically and are coherent and cohesive**

Organization examines whether the composition exhibits a clear structure or plan of development (beginning, middle, and end) and whether the points are logically related to each other. Organization has a vertical dimension (coherence) indicated by the use of paragraphing and transitions to signal the plan or text structure. Organization also has a horizontal dimension (cohesion) evidenced by the connection of one sentence to the next. The writer may employ varied methods to achieve coherence and cohesion (repetition, pronouns, synonyms, parallel structure, connectives, and transitions). Sentence variety and word choice also contribute to cohesiveness.

**Conventions – use of standard written English**

Evaluation of the use of Conventions should take into account the following: how seriously the errors interfere with communication; whether the errors are major or minor; and the number of errors in relation to how much is written (for example, three major errors in three sentences is significantly different from three errors in three paragraphs). For the PSAE, Convention scores will be assigned on the basis of 2 for a developed score and 1 for a developing score. The evaluation of Conventions also takes into account the paper's proximity to a final draft in the writing process. For example, if a student had three weeks to do an assignment with multiple drafts, more stringent criteria would be used in assigning a Conventions score than for an on-demand writing or timed assignment. The PSAE writing sample is scored as a first draft; hence, the plus (2) or minus (1) designation.

Holistic Feature of Writing:

**Integration – evaluation of the paper based on a focused, global judgment of how effectively the paper as a whole uses the four other features of writing to fulfill the assignment**

The purpose of this rating is to provide a general evaluation of how clearly the paper achieves the



assigned task for a specific grade level. The holistic rating assumes that the effectiveness of the paper depends upon the skill with which the student orchestrates the fundamental features to complete the assignment. The judgment is limited to the combination of features and does not include other factors such as humor, originality, or style. It reflects the view that the paper is a total work; the whole is greater than the sum of its parts.

### **Scoring Procedure**

For state assessment, each feature except Conventions is rated on a six-point scale for each grade level. The number indicates the level of the paper's development. In general, the scores may be interpreted as follows:

A score of 1, 2, or 3 (or 1 in Conventions) indicates that the feature is absent or in the developing stages. A score of 4, 5, or 6 (or 2 in Conventions) signals that the feature is basically, adequately, or fully developed.

Each feature is rated independently with the exception of Integration. Integration is tied to the other scores. For example, it is possible for a paper to receive an undeveloped score—that is, a score of 3 or less—in one or more of the other features and still receive a developed score in Integration if the remaining features are strong.

To calculate the score for a paper, add the scores for each feature (to emphasize the holistic nature of good writing, the Integration score is doubled). For example, a paper with scores of Focus = 4, Support = 3, Organization = 4, Conventions = 2, and Integration = 4 will have a total score of 21.

# High School Writing Rubric for Students Persuasive/Expository

	<b>Focus</b>	<b>Support</b>	<b>Organization</b>	<b>Integration</b>
<b>6</b>	<p>The position or subject of the response is stated and developed clearly.</p> <p>The response demonstrates insight. A successful hook captures the reader's attention.</p> <p>The logic of the response is maintained throughout.</p> <p>The conclusion presents strong closure, tying the important points together without being redundant or repetitive.</p>	<p>The position or subject is supported with abundant, original detail using multiple strategies, such as comparison, cause and effect, explanation, and example.</p> <p>The response includes pertinent details that are effective, vivid, and explicit and that are used evenly throughout.</p> <p>The response relies on powerful words and phrases that relate to its position or subject and audience.</p>	<p>Points in the response are organized according to a plan that is sustained throughout.</p> <p>Important points are tied together skillfully by a variety of cohesive ties, such as transitional sentences, conjunctions, pronouns, and topically related words, to link sentences and paragraphs.</p> <p>The intended message has a logical progression of related ideas.</p> <p>Variations in structure and length of sentences add interest to the response.</p>	<p>The response is fully developed for grade level.</p> <p>The focus is clearly stated and developed.</p> <p>The response contains an abundance of balanced, specific, appropriate details.</p> <p>Word choices or phrases demonstrate strong purpose and understanding of audience.</p> <p>Sentences and paragraphs fit smoothly together.</p> <p>The response has very few convention errors; any errors are minor and do not interfere with communication.</p>
<b>5</b>	<p>The position or subject is clearly stated through a thematic introduction, specific preview, or hook.</p> <p>The main position or subject is clear and logical throughout the response.</p> <p>The conclusion builds in an orderly way to closure.</p>	<p>The position or subject is supported with sufficient details throughout.</p> <p>Most major details are developed evenly by using multiple strategies, such as example, comparison, and explanation.</p> <p>Words and phrases convey the intended message in an interesting and natural way.</p>	<p>The response has a clear plan in which all major points and ideas are logically sequenced and paraphrased.</p> <p>Sentence structure and length and word choice are varied.</p> <p>Cohesive ties, such as repeated key words, pronouns, transitions, and link sentences, are used.</p> <p>Paragraphs are logically organized.</p>	<p>The response is developed for grade level.</p> <p>The focus is clear and developed.</p> <p>Details are specific and appropriate.</p> <p>Word choice and phrases are appropriate for the audience and purpose.</p> <p>Sentences and paragraphs generally fit smoothly together.</p> <p>The response has few convention errors, and the errors do not interrupt communication with the intended audience.</p>
<b>4</b>	<p>The response approaches its position or subject through a thematic approach or preview.</p> <p>The introduction may attempt a hook but is somewhat unclear.</p> <p>The conclusion is clear.</p>	<p>Most major points are developed by specific details; some details may show unevenness or incompleteness of ideas.</p> <p>Most major points make sense, but some details are uneven or incomplete.</p> <p>Some words and phrases add strength to the details that are used, although an occasional lapse into slang or careless phrasing may occur.</p>	<p>Most paragraphs are appropriate.</p> <p>There are variations in length and structure of sentences and in word choice that enhance cohesion.</p> <p>The development and the relationship of one idea to the next are clear.</p>	<p>The response is simple, yet clear and appropriate for grade level.</p> <p>Essential details are included but there is no further support.</p> <p>Word choices or phrases are mostly those that are expected for the audience and purpose.</p> <p>Some convention errors may be present, but they do not interfere with the reading of the essay.</p>

	<b>Focus</b>	<b>Support</b>	<b>Organization</b>	<b>Integration</b>
<b>3</b>	<p>The response identifies a position or subject briefly in the introduction or somewhere in the response.</p> <p>The response contains points that generally make sense but may not be completely related to one another.</p> <p>There is little or no sense of closure.</p> <p>There is too little information about the position or subject.</p>	<p>Some main points are developed by specific details.</p> <p>Some general details lack support.</p> <p>Word choice is simple.</p> <p>The response is too short to include much detail.</p>	<p>The response has an identifiable plan.</p> <p>Inappropriate transitions distract the reader and get in the way of understanding.</p> <p>A minor digression disrupts the logical progression of ideas.</p>	<p>The response is partially developed for grade level.</p> <p>One or more of the features is not complete, causing the response to be confusing.</p>
<b>2</b>	<p>The response does not clearly identify the position or subject.</p> <p>The response is narrative instead of persuasive or expository.</p> <p>Some of the ideas are confusing and may not fit logically, or they are repetitious.</p> <p>There is too little information about the position or subject.</p>	<p>A few details are included, but there may be unnecessary repetition.</p> <p>Details are included as a list; each detail on the list may have some extensions.</p> <p>The response is too short to allow a reliable judgment of support.</p>	<p>The response is somewhat organized, but the ideas are confusing to the reader.</p> <p>Important details to further explain the position or subject are omitted within paragraphs.</p> <p>Ideas do not follow a logical sequence and are not connected logically.</p> <p>The response is not persuasive or expository.</p> <p>An idea or ideas are included that are not related or relevant to the position or subject.</p>	<p>An attempt to address the prompt is made, but the response has no subject or position.</p> <p>Most of the features of writing are absent.</p> <p>The response is not persuasive or expository.</p> <p>The response is confusing.</p> <p>The response may be too short to allow the reader to make a reliable judgment.</p> <p>Many serious convention errors may interfere with the reading of the response.</p>
<b>1</b>	<p>The response is unclear and seems to have no subject or position.</p> <p>The response contains little writing.</p>	<p>Details are extremely weak, or are not included.</p> <p>The response is too short to allow a reliable judgment of support.</p>	<p>Little or no effort is made to state a position or subject.</p> <p>Little evidence of a cohesive plan is present.</p>	<p>The writing is confusing and illogical.</p> <p>The response is too short for a reader to judge.</p> <p>Frequent convention errors obscure the ideas.</p>

## Conventions

<b>2</b>	<p>Sentence structure is correct.</p> <p>Pronouns are used correctly.</p> <p>Few run-ons or fragments occur in proportion to the amount written.</p> <p>Punctuation and capitalization are generally correct.</p> <p>Verb tense and subject-verb agreement are correct.</p> <p>The response has few minor and very few major errors.</p>
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**1**

The number of errors in the response interferes with the reader's understanding of what is written.



# **ISBE-Developed Science**



# ISBE-Developed Science Assessment

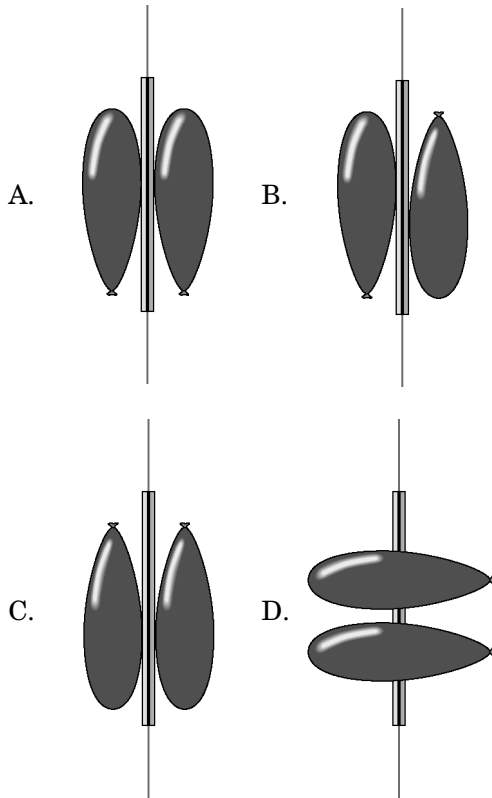
You will take the ISBE-developed science assessment on Day 2 of the PSAE. It will consist of 45 multiple-choice items. You will have 40 minutes to complete this assessment.

The questions on the science assessment measure critical thinking skills required in the natural sciences, including interpretation, analysis, evaluation, reasoning, and problem solving. The assessment presents scientific information in the form of data summaries and short passages, with each followed by at least (and usually) one multiple-choice question.

Test questions are distributed across the Illinois Learning Standards that cover science inquiry; the life, physical, and Earth and space sciences; and the relationship among science, technology, and society.

The following pages contain 35 sample questions that were written for the ISBE-developed science assessment. Following the samples you will find a key on page 58 that gives the correct answer for each question and identifies the Standard or Standards with which the question is aligned.

1. A string is placed through a straw and attached to the floor and the ceiling. Two balloons are used to make a balloon rocket. Which picture shows the best way to attach the balloons to make the rocket go as high as possible?



2. In contrast to DNA, an RNA molecule contains uracil (U) instead of thymine (T). All other bases remain the same. During transcription, an RNA molecule is constructed from a coding strand of DNA using complementary coding. How would the RNA molecule coded from this portion of a DNA molecule TACCGG read?

- A. AUGGCC
- B. ATGGCC
- C. UUGGCC
- D. UAGGCC

3. Scientists studied a floating aquatic flowering plant called duckweed. Three bowls of water contained the following populations of duckweed:

Bowl A – 100 plants per square centimeter

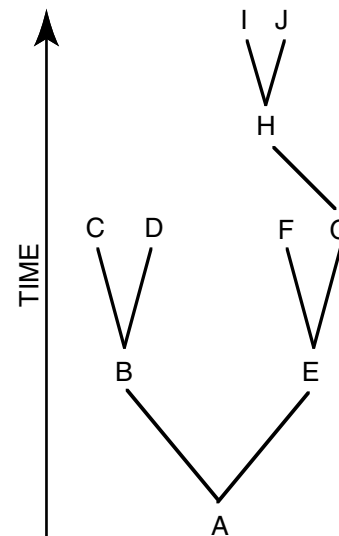
Bowl B – 300 plants per square centimeter

Bowl C – 600 plants per square centimeter

After two months a higher percentage of plants in Bowl C were dead than in the other two bowls. What was most likely being studied in this experiment?

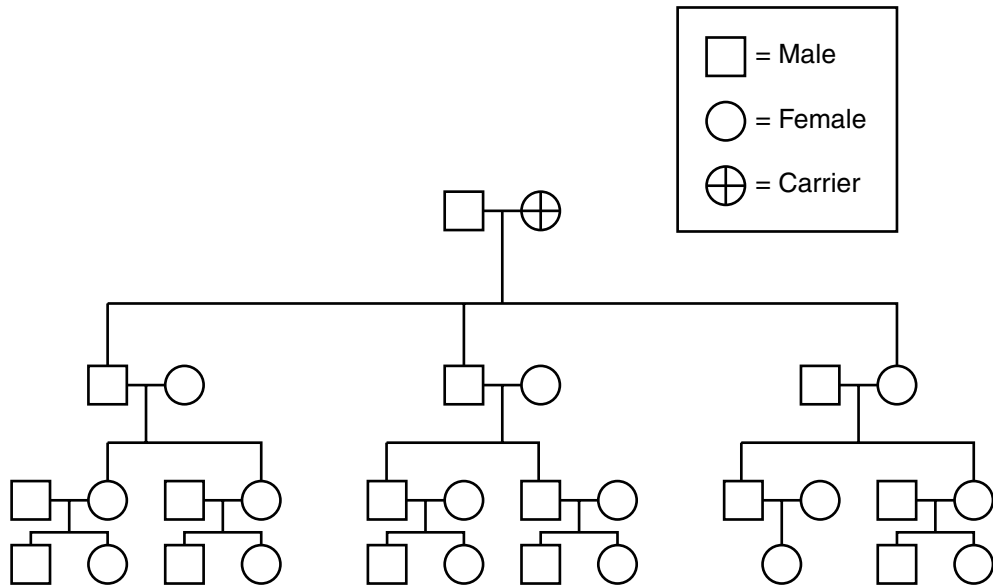
- A. The greenhouse effect and aquatic plants
- B. The maximum temperature for growth of duckweed
- C. The amount of light necessary to propagate aquatic plants
- D. The effect of density on the growth of plants

Use this diagram to answer the next question.



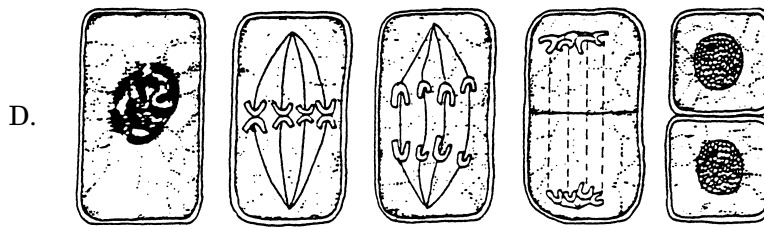
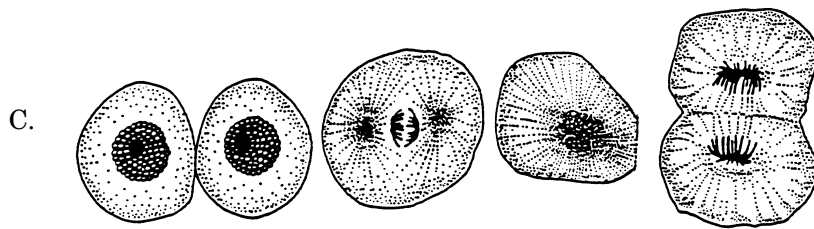
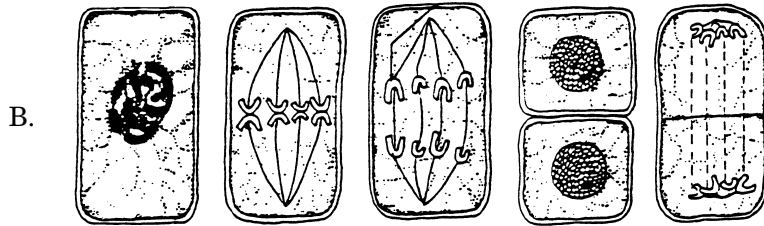
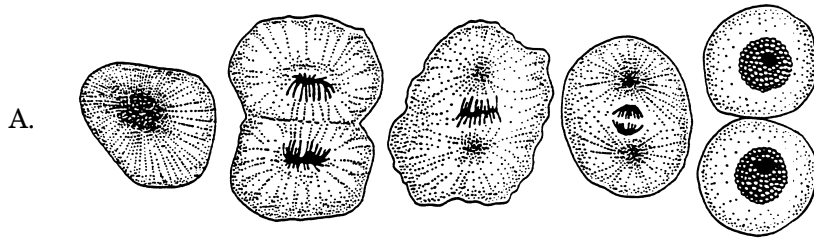
4. Which statement is true about this relationship diagram?
- A. C is the ancestor of B, D, E.
  - B. D is the ancestor of E, H.
  - C. E is the ancestor of F, G, H.
  - D. F is the ancestor of G.





5. A sex-linked recessive gene located on the X-chromosome causes red-green colorblindness. In this pedigree chart, the first-generation father is not colorblind. The mother is a carrier. None of the in-laws is colorblind or a carrier. What is the maximum possible number of direct descendants that could be colorblind?
- A. 1  
 B. 3  
 C. 6  
 D. 8

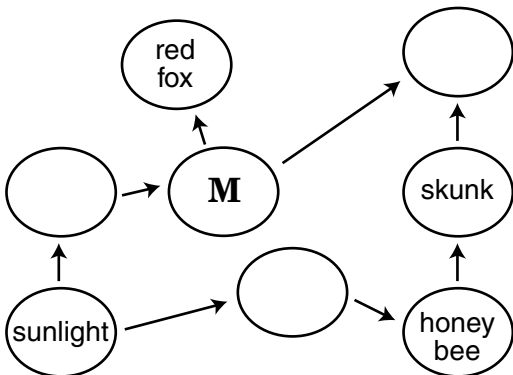
6. Which set of drawings demonstrates what happens to cells in plant root tips during growth?



7. A student was in a small, poorly ventilated room for 2 hours with a large group of people. His rate of breathing increased. What was the most probable cause for this increase?
- The concentration of carbon dioxide in the room increased.
  - The temperature in the room rose.
  - Some of the students in the room were nervous.
  - The concentration of oxygen in the room increased.

8. Fill in each circle in this food web with the number of the correct plant or animal from the list. Remember that the arrows point from the energy provider to the energy user.

- Owl
- Rose
- Grass
- Rabbit

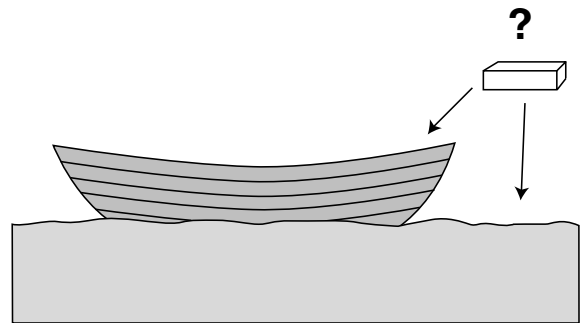


Which plant or animal belongs in the circle labeled **M**?

- Rose
- Grass
- Rabbit
- Owl

9. Elements in the same vertical column of the Periodic Table have similar chemical properties and combining ratios. Which statement accounts for this chemical behavior of these elements?
- They have equal numbers of protons, neutrons, and electrons.
  - They have equal numbers of electrons in their outer energy levels.
  - They have equal numbers of neutrons in their nuclei.
  - They have equal numbers of protons in their nuclei.

10. White light passing through a prism is broken down into many colors. Which best explains what has occurred? The prism separates the light by
- its number of particles.
  - its wavelength.
  - the temperature of each color.
  - the speed of its atoms.



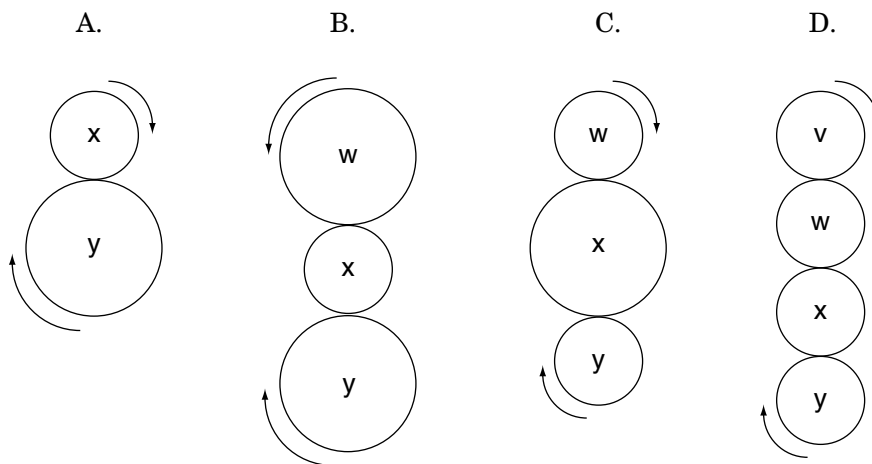
11. A small boat is floating in a small swimming pool as shown. Where should the brick be placed to raise the water level of the swimming pool the most?
- In the boat, because it displaces its weight of water, not its volume
  - In the water, because it displaces its volume of water, not its weight
  - In the boat, because it displaces its volume of water, not its weight
  - In the water, because it displaces its weight of water, not its volume

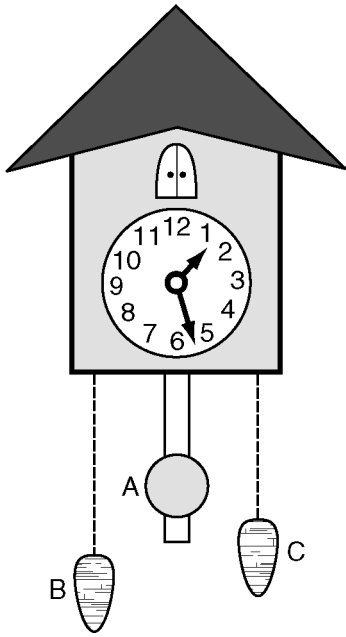
Indicator	Acid Color	pH Range Where Color Change Occurs	Base Color
Creosol Red	Red	1.0 - 2.0	Yellow
Methyl Orange	Red	3.2 - 4.4	Yellow
Bromthymol Blue	Yellow	6.6 - 7.4	Blue
Phenolphthalein	Colorless	8.0 - 10.0	Pink

12. A solution turned yellow when either creosol red or bromthymol blue was added. What is the pH of the solution?

- A. Less than 3.2
- B. Greater than 6.6
- C. Between 2.0 and 6.6
- D. Greater than 7.4

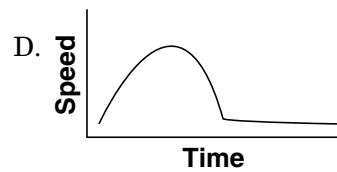
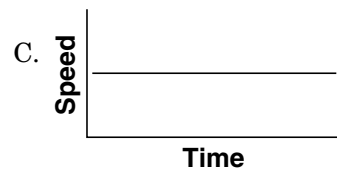
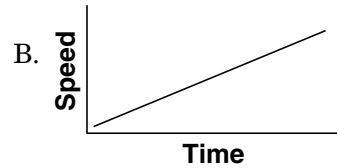
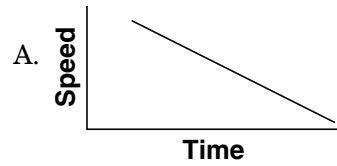
13. When the top wheel is turned in the direction shown, which wheel Y will turn in the direction shown?



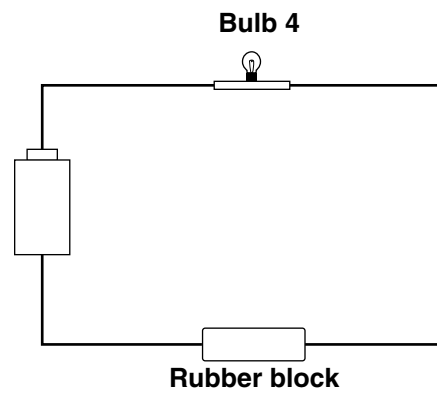
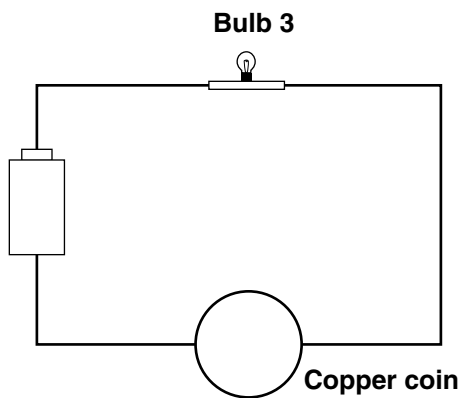
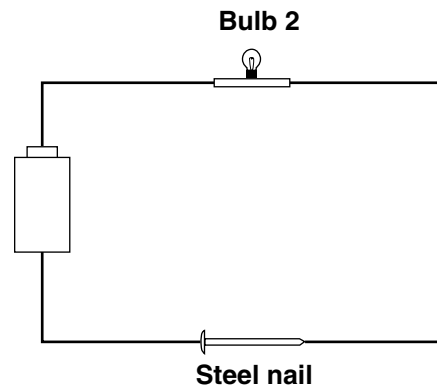
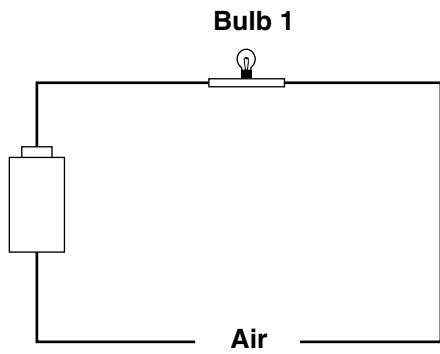


14. Chris received a new cuckoo clock as a gift. However, the clock runs fast by several minutes a day, requiring it to be reset each morning. How could Chris best fix his clock so that it will keep time more accurately?
- Slide the weight (A) on the pendulum up.
  - Slide the weight (A) on the pendulum down.
  - Make the pendulum swing at a lower angle.
  - Decrease the weight at A.

15. Which graph would be used by a student to demonstrate that a ball rolling down a ramp gains speed after it is released?



16. The following diagrams show a flashlight battery and a bulb connected by wires to various substances.



Which of the bulbs will light?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 3 and 4 only
- D. 1, 2, and 3 only

17. Methanol is a fuel with the potential to supplement or replace gasoline as an energy source. Which equation represents the reaction that takes place when methanol is burned?
- A.  $C_2H_5OH + 3O_2 \rightarrow 2CO_2 + 3H_2O$
  - B.  $2CH_3OH + 3O_2 \rightarrow 2CO_2 + 4H_2O$
  - C.  $CH_3OH + N_2 + H_2 + O_2 \rightarrow 2HNO_3 + CH_4$
  - D.  $C_2H_5OH + N_2 + H_2 + O_2 \rightarrow 2HNO_3 + 2CH_4$

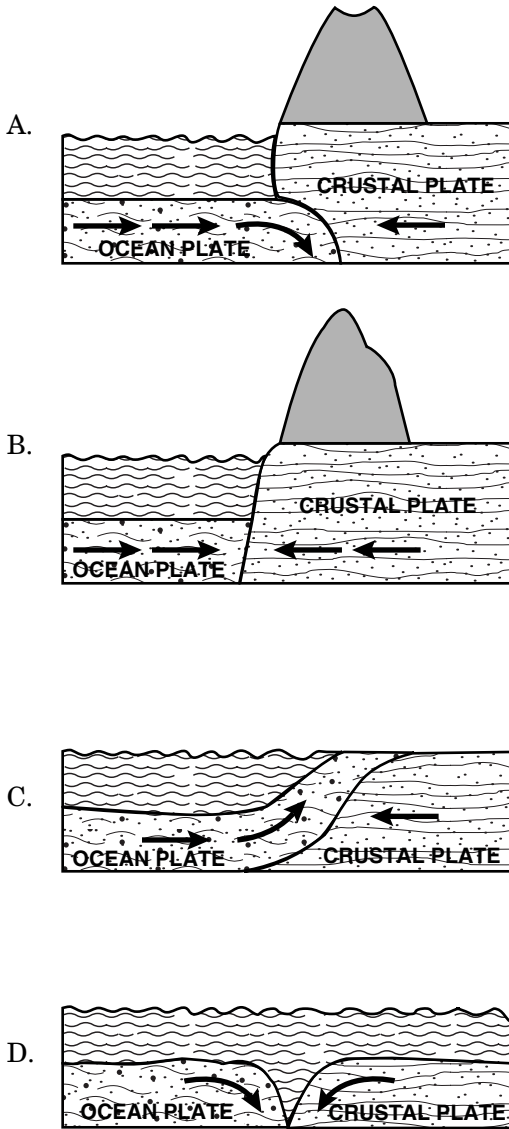
### Rock Classification

Geologists use a classification table to help identify types of rocks that are commonly found in nature. There are three ways rocks are commonly formed. Igneous rocks (I) are formed by volcanic action and so may have air holes from the gas that escapes. The size of the crystals in igneous rocks is determined by how long it takes the rock to cool. The slower it cools, the larger the crystals. Sedimentary rocks (S) are made of particles that have been eroded and then redeposited in layers by water or wind. Metamorphic rocks (M) have undergone change because of extremely high heat, pressure, or both.

Rock Classification Table						
Test	Granite	Limestone	Marble	Pumice	Sandstone	Scoria
Is the rock made of crystals?	Yes	No	Yes	No	No	No
Is the rock filled with holes?	No	No	No	Yes	No	Yes
Is the rock dark colored?	Yes	No	No	No	No	Yes
Does the rock react with vinegar?	No	Yes	Yes	No	No	No
To what group does it belong?	I	S	M	I	S	I

18. Which additional test would help identify these rocks?
- A. Find the mass of the rocks.
  - B. Find out how well plants grow in soils made from the rocks.
  - C. Find the volume of the rocks.
  - D. Scratch the rocks with objects of different hardnesses.

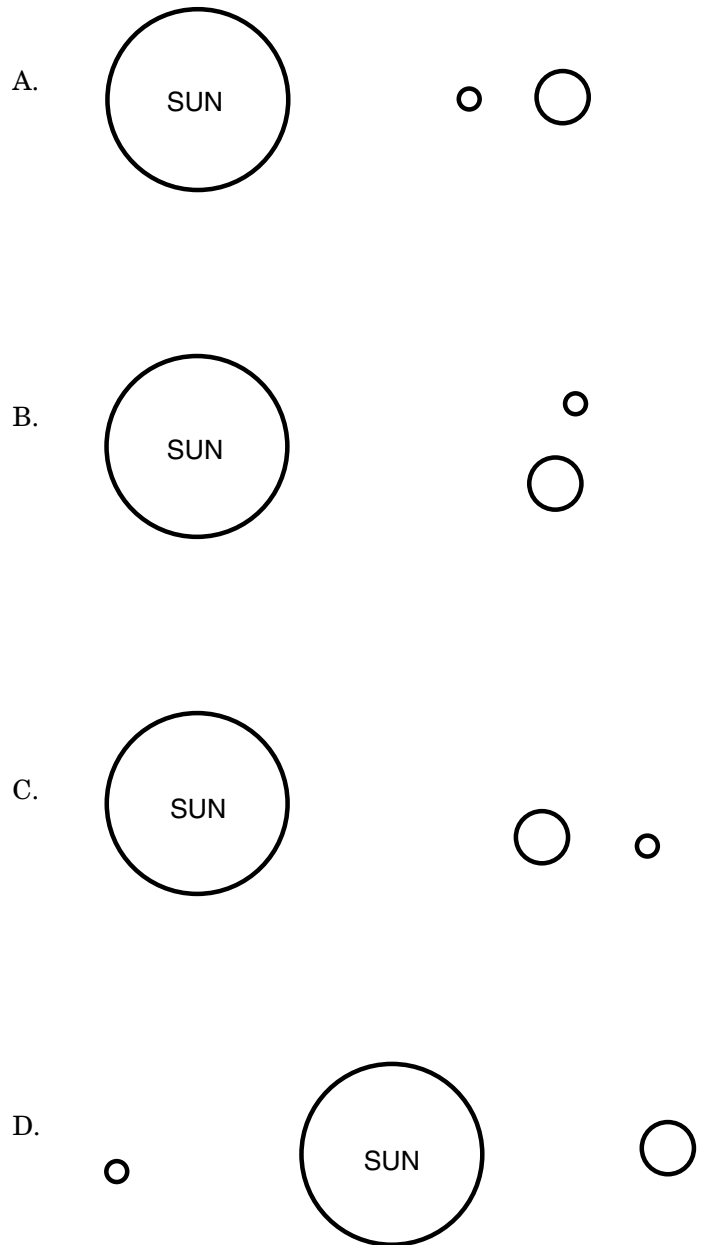
19. Which diagram shows what happens when an ocean plate and a crustal plate meet?



20. Why is the accumulation of thick loess deposits an important factor in making Illinois an excellent area for growing crops?

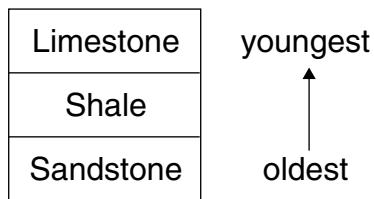
- A. Loess forms an impermeable layer beneath the rich topsoil.
- B. Loess is a key component of the rich topsoil.
- C. Loess is made of heavy clay, which prevents erosion of the rich topsoil.
- D. Loess blows away easily and exposes the rich topsoil.

21. Which diagram shows the position of the sun, Earth, and the moon during a solar eclipse?





22. In the United States, the North Star does not move in the night sky. Why does the North Star appear to be stationary?
- A. It is in a direct line with the North Pole.
  - B. It is in a direct line with the South Pole.
  - C. It is directly over the equator.
  - D. It moves at the exact same speed as Earth.



23. Based on the rock types and sequence of the vertical rock column, what environmental change most likely occurred?
- A. Sea level was rising.
  - B. Glaciers covered the area.
  - C. Floods occurred at regular intervals.
  - D. Mountain building was occurring.

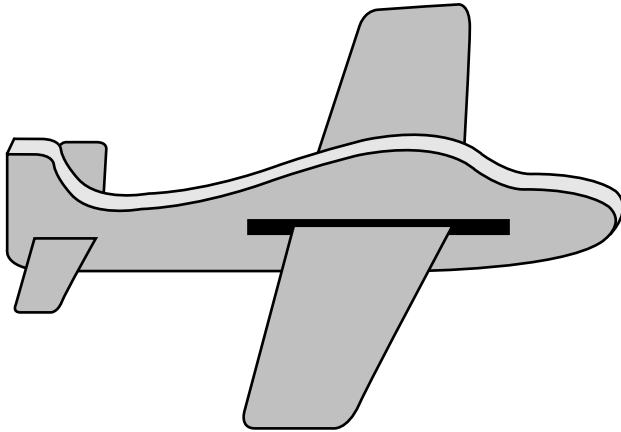
24. Which of these would require the least ethical judgment on the part of the experimenter?
- A. Testing for the transmission of the AIDS virus in human beings
  - B. Testing for excessive iron in a city water supply
  - C. Determining the effects on human life of a newly developed herbicide to be used in an agricultural area
  - D. Dissecting a live frog in a high school biology class

25. A student reported he could make a rainbow by holding a small, clear plastic box filled with water in the sunlight. To check this report for accuracy, a scientist would
- A. find out if others have had the same result.
  - B. accept this as a fact.
  - C. realize a box can't be used to produce this effect.
  - D. know that it takes a three-sided object to make a rainbow.

26. Acid rain is produced by pollutants such as sulfur dioxide and nitrogen oxides that come from automobile and industrial factory exhaust. These pollutants form acids such as sulfuric acid and nitric acid, which eventually fall to Earth as acid rain. Acid rain kills aquatic organisms and damages forests. Which explains how pollutants in automobile and factory exhaust become acidic?
- A. Exhaust pollutants react chemically with water to produce acids.
  - B. Exhaust pollutants are heated by the atmosphere and become acidic.
  - C. Exhaust pollutants react physically with water to produce acids.
  - D. Exhaust pollutants are cooled by the atmosphere and become acidic.
27. A team of six scientists is conducting a study of the potential health hazards of a new chemical used in making house paints. One team member's results show the possibility of a slight hazard, although this does not show up in any of the studies performed by the other team members. The team decides to publish all the results and suggest the need for further investigation into the possibility of a health hazard. Why would they make this decision?
- A. The other studies are incorrect because they did not show evidence of a hazard.
  - B. The team members all believe the results of the study showing a slight hazard.
  - C. The group funding the research wanted to find evidence of a health hazard.
  - D. Even if the studies did not all agree, it is important for the scientific community to have the complete results of the research.
28. Some scientists predict that increasing the amount of carbon dioxide in our atmosphere will have adverse effects on the environment. What is one of these adverse effects?
- A. Melting of glaciers and polar ice
  - B. Depletion of the ozone layer
  - C. Destruction of the rain forests
  - D. Cooling effect over Earth
29. Since the 1940s, people have been using antibiotics to kill disease-causing bacteria. What has been one consequence of the use of antibiotics?
- A. Viruses are genetically combining with bacteria.
  - B. Most disease-causing bacteria are becoming extinct.
  - C. Bacteria that are less resistant to antibiotics have evolved.
  - D. Bacteria that are more resistant to antibiotics have evolved.

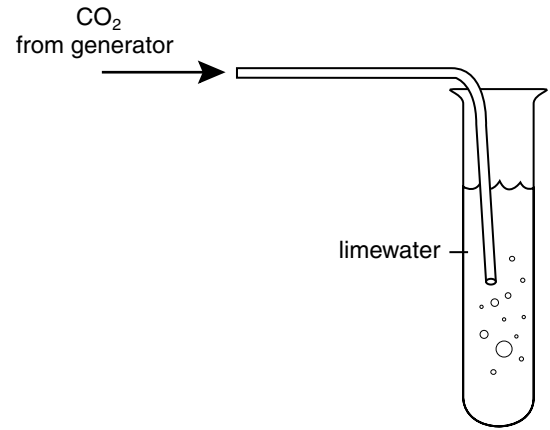
30. Vegetation is planted on the banks of newly built roads. This is done primarily to

- A. beautify the area.
- B. limit erosion.
- C. prevent cars from crossing lanes.
- D. absorb loud sounds from the road.



31. Chris bought a model airplane. Every time the plane was thrown into the air, it did a nose dive into the ground. Which design change will allow the plane to climb as it flies?

- A. Add weight to the front of the nose.
- B. Make the nose more pointed.
- C. Make the wings narrower.
- D. Slide the wings forward.



32. If the end of the  $\text{CO}_2$  tube is inserted into a test tube of limewater, what color will the limewater turn?

- A. Rose pink
- B. Milky white
- C. Dark purple
- D. Bright green

33. Geologists examined the rock structure along a segment of the coastline of North America. They found several large tracts of land that contained rocks and fossils that were very different from those in adjacent tracts. Which best explains this observation?

- A. Alluvial deposition
- B. Plate tectonics
- C. Diverging boundaries
- D. Volcanic eruptions

Two culture vials are prepared. Ten drops of bromthymol blue are added to each test tube. Bromthymol blue is an indicator that turns yellow in the presence of carbon dioxide. Organism X is put in vial #1, and organism Y is put in vial #2. Both vials are exposed to normal day and night conditions. Vial #1 turns yellow, and vial #2 remains blue.

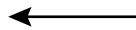
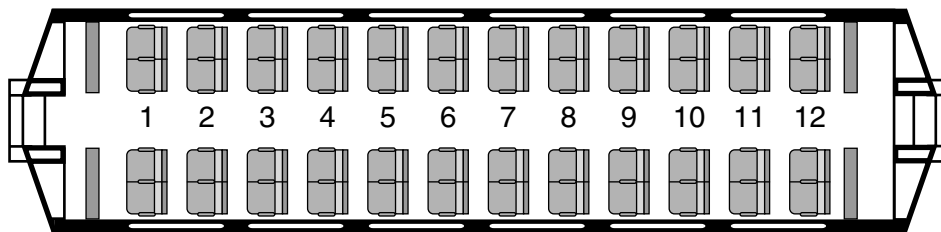
34. How do organisms X and Y fit into the food web?

- A. X is a consumer, and Y is a producer.
- B. X is a producer, and Y is a consumer.
- C. X is a herbivore, and Y is a carnivore.
- D. X is a carnivore, and Y is a herbivore.

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*Use this information to answer the next question.*

Imagine that a person sitting in row 6 inside a car on a high-speed train moving at 150 mph flips a coin two feet straight up.



Direction train is moving

35. In which row will the coin most likely land?

- A. 5
- B. 6
- C. 7
- D. 10



## Key to ISBE-Developed Science Sample Items

Item Number	Standard(s)	Correct Answer
1	11B	A
2	12A	A
3	12B	D
4	11A, 12A	C
5	11A, 12A	C
6	12A	D
7	12A	A
8	12B	C
9	12C	B
10	12C	B
11	12C	A
12	11A, 12C	C
13	11A, 12D	C
14	12D	B
15	11A, 12D	B
16	11A, 12C	B
17	12C	B
18	11A, 12E	D
19	11A, 12E	A
20	12E	B
21	11A, 12F	A
22	12F	A
23	12A, 12E	A
24	13A	B
25	13A	A
26	13B	A
27	13A	D
28	13B	A
29	13B	D
30	12E, 13B	B
31	11B	D
32	12C	B
33	12E	B
34	12B	A
35	12D	B



# *WORK*KEYS<sup>®</sup>

## **Preparing for the WorkKeys Assessments**

**ACT**<sup>™</sup>  
INFORMATION FOR LIFE'S TRANSITIONS

ACT endorses the *Code of Fair Testing Practices in Education*, a statement of guidelines for those who develop, administer, or use educational tests and data. The *Code* sets forth criteria for fairness in four areas: developing and selecting appropriate tests, interpreting test scores, striving for fairness, and informing test takers. ACT is committed to ensuring that each of its testing programs upholds the *Code's* standards for appropriate test development practice and use.

A copy of the full *Code* may be obtained free of charge from ACT Customer Services (68), P.O. Box 1008, Iowa City, IA 52243-1008, 319/337-1429.



## **Some Basic Information**

### **What is WorkKeys®?**

The WorkKeys® system from ACT™ is designed to help you develop better workplace skills. Better skills mean better-paying jobs—in any career field.

The WorkKeys system consists of job profiling (finding out which skills are needed on the job), assessments (the tests you'll be taking plus several others), reporting (telling you how your skills match job requirements), and instructional support (guidance to educators related to improving students' skill levels).

### **Why is WorkKeys important?**

In many places throughout the United States, employers find that students are not adequately trained even for entry level jobs. WorkKeys helps businesses and educators work together to ensure that you leave school prepared for real jobs in the real world.

### **What types of skills are needed?**

WorkKeys measures skills that employers believe are critical to job success—skills such as reading, math, listening, locating information, and teamwork. These skills are valuable for any type of occupation—skilled or professional—and at any level of education.

### **How does the system work?**

WorkKeys helps you figure out how prepared you are for jobs that interest you and guides you to the education and training you need. The system documents your work skills in key areas, giving you an edge with employers when you apply for jobs.

### **Isn't it easy to find a job in today's economy?**

There are plenty of jobs available, but employers are having a great deal of trouble finding workers with adequate skills. With the right training and experience, people can move from low-skill, low-pay jobs to high-skill, high-pay jobs.

### **So are these tests designed for only low-level, blue-collar jobs?**

Not at all. WorkKeys has determined the job skills needed for more than 3,300 unique job titles, ranging from accountant to automotive technician and from welder to webmaster. In fact, the fastest growing types of WorkKeys job profiles are being done for professional, technical, and managerial jobs that require at least a bachelor's degree. The abilities to learn, listen, communicate, work in teams, and solve problems—all areas addressed by WorkKeys—are important assets for any employee, regardless of career choice.

## **Do higher skills mean higher salaries?**

Studies show that jobs requiring higher skills in math, locating information, and reading pay higher entry level salaries. By increasing your skills while you are still in school, you increase your opportunities for higher salaries in the future.

## **Why should I care about these tests?**

Since WorkKeys tests are fairly new and aren't the college entrance exam that many high school students focus on, some students don't see the purpose in trying to do their best on them. You need to remember, however, that everyone enters the workforce eventually—whether you get a job right out of high school, work part-time while continuing your education, or go through extensive postsecondary training. WorkKeys stresses skills development important for every type of employment.

## **Why do some of the test questions seem irrelevant to my career choice?**

Since WorkKeys questions relate to a variety of real-life experiences, the situations sometimes deal with work environments that do not interest particular students. Even very difficult exams, such as the Law School Admission Test or the Graduate Record Examination, routinely contain analytical reasoning questions that feature taxi drivers, executives, carpet sellers, professors, bellhops, architects, and numerous other workers. The basic skills needed to solve a legal question, configure a computer, or schedule employee vacations may be similar for all these tests. And while some WorkKeys test questions can be fairly easy, others are quite difficult—to measure the widest possible range of skills.

## **Can I study for the tests?**

Since WorkKeys measures applied skills, you can't cram to memorize answers for the tests. However, you can use these practice sets to see typical WorkKeys test questions.

## **What happens to the test results?**

The results of the WorkKeys tests you take will be combined with scores from other parts of the Prairie State Achievement Examination.

You can also use your WorkKeys results to get a better picture of jobs you are ready for and to improve areas where your skills are weak. Employers can use the results to determine how qualified you are for positions in their organizations. And schools can use the information—along with input from employers—to ensure that their curriculum provides adequate work skills training to meet the needs of businesses.

## Test Taking Tips

Although there are several different WorkKeys skill assessments, you will be taking only the *Applied Mathematics* and *Reading for Information* tests as part of the Prairie State Achievement Examination. A description of each follows. Both tests contain multiple-choice items with a question followed by five possible answers from which you are to choose the *best* one. The following suggestions apply to both tests.

### **Pace yourself.**

The time limits set for each WorkKeys test give nearly everyone enough time to finish all the questions. However, it is important to pace yourself. Don't spend too much time on one problem or reading section; go on to the other questions and come back if there is time.

### **Listen to and read the directions for each test carefully.**

Before you begin taking one of the WorkKeys tests, pay careful attention to the directions. These tests ask for the *best* answer. It is important to keep this in mind when answering the questions, since it will sometimes be possible to think of responses that would be better than any of those offered or to defend a choice as not entirely wrong. Best-response formats are consistent with the real world, where choosing among less-than-perfect alternatives is routine.

You may want to work out the answer you feel is correct and look for it among the choices given. If your answer is not among the choices provided, reread the question and consider all of the answer choices again to find the best one.

### **Read each question carefully.**

It is important that you understand what each question asks. Some questions will require you to go through several steps to find the best answer, while others can be answered more quickly.

### **Answer the easy questions first.**

The best strategy for taking a test is to answer the easy questions and skip the questions you find difficult. After answering all of the easy questions, go back and try to answer the more difficult questions.

### **Use logic in more difficult questions.**

When you return to the more difficult questions, try to use logic to eliminate incorrect answers to a question. Compare the answer choices to each other and note how they differ. Such differences may provide clues as to what the question requires. Eliminate as many incorrect answers as you can, then make an educated guess from the remaining answers.

### **Answer every question.**

Your score on the WorkKeys tests will be based on the number of questions that you answer correctly; **there is no penalty for guessing.** Thus, you should answer every question within the time allowed for each test, even if you have to guess. The test administrator will announce when there are five minutes remaining on each test.

### **Review your work.**

If there is time left after you have answered every question on a test, go back and check your work on that test. Check to be sure that you marked only one answer to each question. You will not be allowed to go back to any other test or mark answers to a test after time has been called on that test.

### **Be precise in marking your answer document.**

Be sure that you fill in the correct circles on your answer document. Check to be sure that the number for the line of circles on your answer document is the same as the number for the question you are answering. Position your answer document next to your test booklet so you can mark your answers quickly and completely.

### **Erase completely.**

If you want to change an answer on your answer document, be sure to erase the unintended mark completely.

# **WorkKeys *Applied Mathematics* Assessment**

Applied Mathematics is skill in applying mathematical reasoning and problem-solving techniques to work-related problems. Solving mathematical problems in the workplace can differ from solving problems in the classroom. While the math skills needed are the same, math problems in the workplace are not usually laid out neatly in a textbook format. Instead, the employee may be responsible for identifying and locating the necessary information (e.g., on a cash register, price tag, or catalog) and for knowing what to do with that information. It is, therefore, critical to strengthen your core mathematics skills and to develop your problem-solving strategies. Individuals possessing these Applied Mathematics skills will be able to successfully tackle new situations involving mathematics problems in the workplace. A formula sheet that includes all formulas required for the assessment is provided.

There are five levels in the Applied Mathematics skill scale, ranging from Level 3, the least complex, to Level 7, the most complex. These levels were developed based on two main criteria:

- the types of mathematical operations employees must perform, and
- the form and order in which employees receive the information; that is, the presentation of the information.

The skills at the lowest level involve using whole numbers and some decimals in basic math operations: addition, subtraction, multiplication, and division. As the levels progress, the math operations involve more steps. Furthermore, they include decimals and fractions, conversion of units, averaging, calculating area and volume, and ratios.

As the complexity of the levels increases, the presentation of the information becomes more of a barrier to problem solving. The wording becomes ambiguous, the presence of unnecessary information is more likely, and pertinent information is less obvious. Regardless of skill level, most of these problems will involve one or more of the following applications:

## **Quantity**

Employees often need to determine the number of items sold, produced, or purchased, or to figure totals on a per unit basis.

## **Money**

Working with monetary units is a central part of business and relates to virtually every job, if in no other way than to understanding a paycheck. Tasks involving monetary units include figuring sales, costs, wages, and expenses.

## Time

Some tasks involve figuring elapsed time. Other problems are also frequently figured in terms of time (e.g., production, sales, costs, distance, area). In many of these tasks, employees must be familiar with conversion of time units.

## Measurement

Calculating distance, area, weight, and volume is crucial to most work situations. Again, employees must be familiar with conversions, as well as the appropriate degree of accuracy needed for different situations.

## Proportions and Percentages

Proportions can be used in many tasks that require making predictions (e.g., if this is the amount for X units, how much is needed for Y units). Percentages are used in the workplace to calculate commissions, discounts, taxes, price increases, changes in sales, and wage changes.

## Averages

Many records in the workplace are expressed in terms of averages (e.g., those involving sales records, wages, costs, hours worked). These averages become tools in the decision-making processes of the business.

Many math problems found in the workplace combine two or more applications: What **quantity** can be produced in a specified **time**? What **distance** can be traveled in a particular **time**? What is the **average** cost in terms of **money**? A common combination of applications is finding the best deal, which requires employees to perform various calculations and then compare the results in terms of relative cost. Examples of typical problems are found in the WorkKeys Applied Mathematics Practice Set.

## Calculators

WorkKeys recommends the use of calculators for the *Applied Mathematics* test. No problem on the test requires the use of a calculator; however, it is generally to your advantage to use one.

- If you regularly use one in class or when doing your homework, it makes sense to use one on the test. But if you aren't comfortable using a calculator, you may decide not to use one on the test. You can always bring one and decide not to use it. Pack it the night before so you won't forget it in the morning.
- We recommend that you use a calculator that you are used to—as long as it is not one of the kinds that are not permitted. Using a more powerful calculator that you are not familiar with is unlikely to give you an advantage over the kind you normally use.

- You may **NOT** use these calculators:
  - ✓ pocket organizers
  - ✓ handheld or laptop computers
  - ✓ electronic writing pads or pen-input devices
  - ✓ models with a QWERTY (typewriter) keypad (Calculators with letters on the keys are permitted as long as the keys are **not** arranged in QWERTY format.)
  - ✓ models with built-in Computer Algebra Systems—Prohibited calculators in this category include **all** calculators in **all** of the following series:
    - ❑ Casio: CFX-9970G (including, for example, CFX-99706E) and Algebra fx 2.0
    - ❑ Texas Instruments: TI-89 and TI-92 (including, for example, TI-92 Plus)
    - ❑ Hewlett-Packard: HP-40G and HP-49G
  
- The following types of calculators are permitted, but only after they are modified as noted:
  - ✓ calculators with paper tapes: *Remove the paper.*
  - ✓ calculators that make noise: *Turn off the sound feature.*
  - ✓ calculators that can communicate wirelessly with other calculators: *Completely cover the infrared data port with heavy opaque material, such as duct tape or electrician’s tape.*
  - ✓ calculators that have power cords: *Remove all power/electrical cords.*
  
- You **may** use any four-function, scientific, or graphing calculator on the *Applied Mathematics* test, as long as it doesn’t have any of the features on the above lists.
  
- If you plan to use a calculator, you must bring one with you to the test. You can’t share calculators and the test supervisor will **not** lend you one.
  
- Make sure your calculator works properly. Bring a spare calculator or extra batteries, if you wish. Test supervisors will **not** have extra batteries or calculators.
  
- You may use a calculator **only** for the *Applied Mathematics* test.
  
- If you bring a calculator, the test supervisor will make sure that you:
  - ✓ use an acceptable type of calculator
  - ✓ use your backup calculator only if your primary calculator fails
  - ✓ do **not** share your calculator with any other test taker
  - ✓ do **not** store test materials in your calculator’s memory
  
- If your calculator has large characters (one-inch high or larger) or a raised display, the supervisor may assign you to a seat where no other test taker can see your calculator.





## WorkKeys Applied Mathematics Practice Set

This practice set can help you understand the WorkKeys Applied Mathematics skill levels and give you practice for the actual WorkKeys assessment. However, remember that this practice set is **not** a full-length test and your score is **not** a substitute for the actual WorkKeys test score. The actual test consists of 33 problems and has a time limit of 45 minutes.

The WorkKeys *Applied Mathematics* assessment measures skill in applying mathematical reasoning to work-related problems. The test involves setting up and solving the types of problems and doing the types of calculations that actually occur in the workplace. It is designed to be taken with a calculator and a formula sheet, as both would be available on the job. There are five skill levels, ranging from Level 3 to Level 7. As you move from Level 3 to Level 7, the mathematical concepts and calculations become more complex.

# Applied Mathematics Formula Sheet

## Distance

1 foot = 12 inches  
1 yard = 3 feet  
1 mile = 5,280 feet  
1 mile  $\approx$  1.61 kilometers  
1 inch = 2.54 centimeters  
1 foot = 0.3048 meters  
1 meter = 1,000 millimeters  
1 meter = 100 centimeters  
1 kilometer = 1,000 meters  
1 kilometer  $\approx$  0.62 miles

## Area

1 square foot = 144 square inches  
1 square yard = 9 square feet  
1 acre = 43,560 square feet

## Volume

1 cup = 8 fluid ounces  
1 quart = 4 cups  
1 gallon = 4 quarts  
1 gallon = 231 cubic inches  
1 liter  $\approx$  0.264 gallons  
1 cubic foot = 1,728 cubic inches  
1 cubic yard = 27 cubic feet  
1 board foot = 1 inch by 12 inches by 12 inches

## Weight/Mass

1 ounce  $\approx$  28.350 grams  
1 pound = 16 ounces  
1 pound  $\approx$  453.592 grams  
1 milligram = 0.001 grams  
1 kilogram = 1,000 grams  
1 kilogram  $\approx$  2.2 pounds  
1 ton = 2,000 pounds

## Rectangle

perimeter =  $2(\text{length} + \text{width})$   
area =  $\text{length} \times \text{width}$

## Rectangular Solid (Box)

volume =  $\text{length} \times \text{width} \times \text{height}$

## Cube

volume =  $(\text{length of side})^3$

## Triangle

sum of angles =  $180^\circ$   
area =  $\frac{1}{2}(\text{base} \times \text{height})$

## Circle

number of degrees in a circle =  $360^\circ$   
circumference  $\approx 3.14 \times \text{diameter}$   
area  $\approx 3.14 \times (\text{radius})^2$

## Cylinder

volume  $\approx 3.14 \times (\text{radius})^2 \times \text{height}$

## Cone

volume  $\approx \frac{3.14 \times (\text{radius})^2 \times \text{height}}{3}$

## Sphere (Ball)

volume  $\approx \frac{4}{3} \times 3.14 \times (\text{radius})^3$

## Electricity

1 kilowatt-hour = 1,000 watt-hours  
amps = watts  $\div$  volts

## Temperature

$^\circ\text{C} = 0.56(^\circ\text{F} - 32)$  or  $\frac{5}{9}(^\circ\text{F} - 32)$   
 $^\circ\text{F} = 1.8(^\circ\text{C}) + 32$  or  $(\frac{9}{5} \times ^\circ\text{C}) + 32$

**NOTE:** Problems on the WorkKeys *Applied Mathematics* assessment should be worked using the formulas and conversions on this formula sheet.

## Applied Mathematics Level 3

Individuals with Level 3 skills can set up and solve problems with a single type of mathematical operation (addition, subtraction, multiplication, or division) on whole numbers, fractions, decimals, or percentages.

1. You work at a fruit market. Bananas cost 50¢ a pound. A customer hands you a bunch of bananas that weighs 3 pounds. How much should you charge for the bunch of bananas?
  - A. \$0.17
  - B. \$0.50
  - C. \$0.53
  - D. \$1.50
  - E. \$3.50
  
2. To make curtains for a living room window for a customer, you will need three pieces of fabric in the following lengths: 3 feet, 3 feet, and 5 feet. What is the total length of fabric you will need?
  - A. 8 feet
  - B. 11 feet
  - C. 14 feet
  - D. 30 feet
  - E. 45 feet
  
3. You sell pies at a farmers' market for \$7.50 each. A group of 5 kids wants to pitch in equally to share one of your pies. How much will each of them need to pay to buy a whole pie together?
  - A. \$ .75
  - B. \$1.50
  - C. \$2.50
  - D. \$3.75
  - E. \$7.50

## Applied Mathematics Level 4

Individuals with Level 4 skills can set up and solve problems with one or two different mathematical operations (addition, subtraction, multiplication, or division) on whole numbers, fractions, decimals, or percentages.

1. You are a receptionist at a doctor's office. A patient's bill for a checkup totals \$85.00. The patient's health insurance requires the patient to pay 20% of the total bill. How much should the patient pay for the checkup?
  - A. \$ 4.25
  - B. \$ 8.50
  - C. \$17.00
  - D. \$42.50
  - E. \$68.00
  
2. You are scheduling a new delivery route and you need to find out how long it will take a driver to complete the route. You start the route at 9:50 A.M. and finish at 2:05 P.M. How long does it take to drive the route?
  - A. 4 hours 15 minutes
  - B. 4 hours 55 minutes
  - C. 5 hours 15 minutes
  - D. 5 hours 45 minutes
  - E. 7 hours 45 minutes
  
3. As a bowling instructor, you figure your students' averages during tournaments. In 5 games, one bowler had the following scores: 143, 156, 172, 133, and 167. What was that bowler's average?
  - A. 147
  - B. 153
  - C. 154
  - D. 156
  - E. 161

## Applied Mathematics Level 5

Individuals with Level 5 skills can set up and solve problems with several steps of logic and calculation involving a mixture of whole numbers, fractions, decimals, or percentages.

1. As a laboratory assistant, you measure chemicals using the metric system. For your current research, you need to measure out 45 grams of sodium chloride. The bottle you are using lists the amount in ounces. About how many ounces of sodium chloride will you need?
  - A. 0.1
  - B. 1.6
  - C. 28.4
  - D. 720.0
  - E. 1,275.8
  
2. You are making a welding fixture and must cut down a length of steel tubing from  $19\frac{3}{8}$  inches to  $11\frac{9}{16}$  inches. When you cut the tubing, you will waste  $\frac{1}{16}$  inch of it because of the width of the saw cut. If the leftover piece is long enough, you will use it in another fixture. How long will this leftover piece be?
  - A.  $7\frac{3}{4}$
  - B.  $7\frac{13}{16}$
  - C.  $7\frac{7}{8}$
  - D.  $8\frac{1}{4}$
  - E.  $8\frac{3}{4}$
  
3. You are doing marketing research to find out the purchasing potential of students in the community. Based on the latest census, there are 9,860 students in a population of 62,400 people. Students make up what percent of the total population?
  - A. 6.3
  - B. 7.3
  - C. 15.8
  - D. 52.5
  - E. 84.2

## Applied Mathematics Level 6

Individuals with Level 6 skills can set up and solve problems containing unnecessary information and requiring multiple steps. Calculations involve a mixture of whole numbers, fractions, decimals, or percentages.

1. You are a school photographer taking individual and class pictures for 2 classes of 21 students each. On average, each individual picture takes 3 minutes and a class picture takes 10 minutes. About how long should it take you to get all of the pictures?
  - A. 1 hour 3 minutes
  - B. 1 hour 13 minutes
  - C. 2 hours 6 minutes
  - D. 2 hours 16 minutes
  - E. 2 hours 26 minutes
  
2. You are applying fertilizer to a football field. The field is 360 feet long and 160 feet wide. You use 8 pounds of fertilizer per 1,000 square feet. The fertilizer comes in 50-pound bags. How many bags of fertilizer will you need to complete the job?
  - A. 6
  - B. 7
  - C. 8
  - D. 9
  - E. 10
  
3. At Appliance City you sold a refrigerator to a customer for \$369.00. Appliance City advertises that if a customer finds the same refrigerator anywhere else for a lower price you will give a refund equal to 150% of the price difference. The customer returns with a Kitchen Stuff Inc. ad that shows the same refrigerator for \$335.00. After you give the advertised refund to the customer, what is the customer's final cost?
  - A. \$ 51.00
  - B. \$219.00
  - C. \$318.00
  - D. \$335.00
  - E. \$364.00

## Applied Mathematics Level 7

Individuals with Level 7 skills can set up and solve complex problems requiring extensive calculations. They can calculate rate of change, set up and manipulate complex ratios and proportions, find multiple areas or volumes of two- and three-dimensional shapes, find the best economic value of several alternatives, and locate errors in multiple-step calculations.

1. You are an urban planner assessing the growth of a city. Ten years ago, the city's population was 249,583. Its current population is 318,270. By about what percentage has the city grown over the past ten years?
  - A. 13%
  - B. 22%
  - C. 28%
  - D. 69%
  - E. 78%
  
2. You are comparing prices from 2 office supply stores. Your office needs 5 cases of blue paper. Home & Office Headquarters lists a case of paper at \$25.85 with a 10% discount on an order of 5 cases or more. Office Supplies R Us lists a case of paper at \$27.36 with a 15% discount on 5 cases or more. Delivery costs from Home & Office Headquarters are \$2.50 per case. Office Supplies R Us will deliver for \$10 an order. What is the least amount that you would have to spend for the paper?
  - A. \$ 23.26
  - B. \$ 33.26
  - C. \$ 71.80
  - D. \$126.28
  - E. \$141.75
  
3. To complete bookshelves, a customer at your store needs to purchase vertical brackets to attach to the wall. The customer wants the shelving to be 9 feet high (vertically) and 10 feet long (horizontally). The wall brackets come in 48-inch and 60-inch sections. The 48-inch sections cost \$12.95; the 60-inch sections cost \$16.95. The brackets should be placed 1 foot from each end and no more than 24 inches apart. Before tax is added, what will be the total cost of the brackets the customer will need?
  - A. \$ 89.70
  - B. \$119.60
  - C. \$129.50
  - D. \$149.50
  - E. \$179.40

## Answers to Applied Mathematics Level 3 Practice Set

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### An Important Consideration

Some WorkKeys questions have a response choice (the “key”) that can be clearly defined as right or correct and other response choices (the “distractors” or “foils”) that can be identified as wrong or incorrect. Many WorkKeys questions, however, are in a best-response format: the keyed response is simply the best of those available. It is important to keep this in mind when discussing such questions, since it will sometimes be possible to think of responses that would be better than any of those offered, or to defend a distractor as not entirely wrong. Best-response formats are consistent with the real world, where choices among less-than-perfect alternatives are routinely the case.

Note: The solutions shown indicate one or two ways to solve each problem. There may be other, equally valid methods of solving the problems.

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### Answer to Level 3 Sample Item 1:

This problem involves finding the total cost by multiplying the cost per pound times the number of pounds.

- A. Incorrect:  $50¢ \div 3 = 16.67¢$ , rounded up to \$0.17 (used division instead of multiplication)
- B. Incorrect:  $50¢ \times 1 = \$0.50$  (cost of 1 pound of bananas, not 3)
- C. Incorrect:  $50¢ + 3 = \$0.53$  (used addition instead of multiplication)
- D. **Correct:**  $50¢$  (cost per pound)  $\times$  3 (pounds of bananas) =  $150¢ = \$1.50$  (total cost of bananas)
- E. Incorrect: 3 pounds,  $50¢ \rightarrow \$3.50$  (just put numbers from problem together without doing math)

### Answer to Level 3 Sample Item 2:

Three lengths need to be added to find the total length.

- A. Incorrect:  $3 + 5 = 8$  (only added two of the three lengths)
- B. **Correct:** 3 feet + 3 feet + 5 feet = 11 feet
- C. Incorrect:  $(3 \times 3) + 5 = 14$  feet (multiplied first two lengths instead of adding, then added third length)
- D. Incorrect:  $(3 + 3) \times 5 = 30$  (added first two lengths but then multiplied by third length instead of adding)
- E. Incorrect:  $(3 \times 3) \times 5 = 45$  (used multiplication instead of addition)



### Answer to Level 3 Sample Item 3:

Divide the cost of an item by the number of persons paying for it.

- A. Incorrect:  $7.50 \div 10$  or  $7.50$  with decimal place changed =  $.75$  (divided by 10 instead of 5 or simply changed decimal place of cost of whole pie)
- B. **Correct:**  $\$7.50$  per pie  $\div$  5 kids pitching in for a pie =  $\$1.50$  to be paid by each member of the group
- C. Incorrect:  $7.50 - 5$  or  $7.50 \div 3 = 2.50$  (subtracted 5 from cost of whole pie instead of dividing by 5 or divided by 3 instead of 5)
- D. Incorrect:  $7.50 \div 2 = 3.75$  or  $7.50 \times 5 = 37.50 \rightarrow 3.75$  (divided by 2 instead of 5 or multiplied by 5 instead of dividing and shifted decimal)
- E. Incorrect:  $7.50 \div 1 = 7.50$  (total amount needed to buy whole pie)

## Answers to Applied Mathematics Level 4 Practice Set

### Answer to Level 4 Sample Item 1:

Multiply the patient's bill of  $\$85.00$  times 20% (0.20) to find the amount to pay.

- A. Incorrect:  $85 \div 20 = 4.25$  (divided charges by 20 instead of multiplying by .20)
- B. Incorrect:  $85 \div 10$  or  $\times .10 = 8.50$  (divided charges by 10 or multiplied by .10 instead of multiplying by .20)
- C. **Correct:**  $\$85$  (total bill)  $\times$  .20 (% copay) =  $\$17.00$
- D. Incorrect:  $85 \div 2 = 42.50$  (divided charges by 2 instead of multiplying by .20)
- E. Incorrect:  $85 \times .80 = 68.00$  (calculated insurance company's portion instead of patient's)

### Answer to Level 4 Sample Item 2:

Add 12 hours to the ending time because it is P.M. rather than A.M., then subtract the starting time from the ending time.

- A. **Correct:**  $(2:05 \text{ P.M.} - 9:50 \text{ A.M.}) = (14 \text{ hr } 5 \text{ min} - 9 \text{ hr } 50 \text{ min}) = (13 \text{ hr } 65 \text{ min} - 9 \text{ hr } 50 \text{ min}) = 4 \text{ hr } 15 \text{ min}$
- B. Incorrect:  $(2:05 \text{ P.M.} - 9:50 \text{ A.M.}) = (14 \text{ hr } 5 \text{ min} - 9 \text{ hr } 50 \text{ min}) = (13 \text{ hr } 105 \text{ min} - 9 \text{ hr } 50 \text{ min}) = 4 \text{ hr } 55 \text{ min}$  (borrowed one hour but added 100 minutes)
- C. Incorrect:  $(2:05 \text{ P.M.} - 9:50 \text{ A.M.}) = (14 \text{ hr } 5 \text{ min} - 9 \text{ hr } 50 \text{ min}) = (14 \text{ hr } 65 \text{ min} - 9 \text{ hr } 50 \text{ min}) = 5 \text{ hr } 15 \text{ min}$  (added 60 minutes but forgot to subtract one hour)
- D. Incorrect:  $(2:05 \text{ P.M.} - 9:50 \text{ A.M.}) = (14 \text{ hr } 5 \text{ min} - 9 \text{ hr } 50 \text{ min}) = 5$  (that is, 14-9) hr 45 (that is, 50-5) min (subtracted the minutes the wrong way)
- E. Incorrect:  $(9:50 - 2:05) = (9 \text{ hr } 50 \text{ min} - 2 \text{ hr } 5 \text{ min}) = 7 \text{ hr } 45 \text{ min}$  (ignored the A.M. and P.M. and subtracted the times given the wrong way)

### Answer to Level 4 Sample Item 3:

To answer this question, add the five scores and divide by 5.

- A. Incorrect:  $(133 \times 172) \div 156 = 146.6$ , rounded up to 147 (multiplied low score by high score, then divided by median score)
- B. Incorrect:  $(133 + 172) \div 2 = 152.5$ , rounded up to 153 (added low and high scores, then divided by 2)
- C. **Correct:**  $(143 + 156 + 172 + 133 + 167) \div 5 = 154.2$ , rounded down to 154
- D. Incorrect: 156 is the median of the 5 scores (2 numbers below, 2 numbers above).
- E. Incorrect:  $(143 + 172 + 167) \div 3 = 160.6$ , rounded up to 161 (added first, third, and fifth scores, then divided by 3)

## Answers to Applied Mathematics Level 5 Practice Set

### Answer to Level 5 Sample Item 1:

Using the value given on the formula sheet, the number of ounces can be obtained by dividing the number of grams by the number of grams per ounce.

- A. Incorrect:  $45 \div 453.592 = .099208$  rounded up to 0.1 (divided by number of grams/lb instead of number of grams/oz)
- B. **Correct:**  $45 \text{ grams} \div 28.350 \text{ grams/oz} = 1.58730 \text{ oz}$  rounded up to 1.6
- C. Incorrect: Approximate number of grams/oz (28.350 on formula sheet rounded up to 28.4: no calculation done on amount given in the problem)
- D. Incorrect:  $45 \times 16 = 720.0$  (multiplied by the number of oz/lb instead of dividing by number of grams/oz)
- E. Incorrect:  $45 \times 28.350 = 1275.75$  rounded up to 1,275.8 (multiplied by number of grams/oz instead of dividing)

### Answer to Level 5 Sample Item 2:

The new length as well as the width of the saw cut must be subtracted from the total length.

- A. **Correct:**  $(19 \frac{3}{8} - 11 \frac{9}{16} - \frac{1}{16}) = (19 \frac{6}{16} - 11 \frac{9}{16} - \frac{1}{16}) = (18 \frac{22}{16} - 11 \frac{9}{16} - \frac{1}{16}) = 7 \frac{12}{16} = 7 \frac{3}{4}$
- B. Incorrect:  $19 \frac{3}{8} - 11 \frac{9}{16} = 7 \frac{13}{16}$  (didn't account for saw cut width)
- C. Incorrect:  $19 \frac{3}{8} - (11 \frac{9}{16} - \frac{1}{16}) = 7 \frac{7}{8}$  (subtracted saw cut from piece cut instead of total length)
- D. Incorrect:  $(19 - 11) + (\frac{9}{16} + \frac{1}{16} - \frac{3}{8}) = (19 - 11) + (\frac{10}{16} - \frac{3}{8}) = 8 \frac{1}{4}$  (wrong order of fractions)
- E. Incorrect:  $(19 - 11) + \frac{9-3}{16-8} = 8 \frac{3}{4}$  (subtracted in both the numerator and the denominator)

### Answer to Level 5 Sample Item 3:

Divide the number of students by the total population, then multiply by 100%.

- A. Incorrect:  $62,400 \div 9,860 = 6.3$  (divided the wrong way and did not change to a percent)
- B. Incorrect:  $(62,400 + 9,860) \div 9,860 = 7.3$  (added students plus total population and divided by number of students)
- C. **Correct:**  $9,860 \div 62,400 \times 100\% = 15.8\%$  (the number of students divided by the total number of people times 100%)
- D. Incorrect:  $(62,400 - 9,860) \div 1,000 = 52.5$  (subtracted the number of students from the total people and divided by 1,000 to make the answer seem reasonable)
- E. Incorrect:  $(62,400 - 9,860) \div 62,400 \times 100 = 84.2$  (found the percent of nonstudents)

## Answers to Applied Mathematics Level 6 Practice Set

### Answer to Level 6 Sample Item 1:

Multiply the number of students per class times the number of minutes per student times the number of classes. Add the number of classes times the number of minutes per class picture.

- A. Incorrect:  $21 \times 3 = 63 = 1$  hour 3 minutes (just figured time needed to take individual pictures for one of the classes)
- B. Incorrect:  $(21 \times 3) + 10 = 73 = 1$  hour 13 minutes (just figured time needed to take individual and class pictures for one of the classes)
- C. Incorrect:  $(21 \times 3) \times 2 = 126 = 2$  hours 6 minutes (just figured time needed to take individual pictures for the 2 classes)
- D. Incorrect:  $(21 \times 3) \times 2 + 10 = 136 = 2$  hours 16 minutes (figured time needed to take individual pictures for the 2 classes and just 1 class picture)
- E. **Correct:**  $(21 \text{ students/class} \times 3 \text{ minutes/individual picture}) \times 2 \text{ classes} + (2 \text{ classes} \times 10 \text{ minutes/class picture}) = 146 \text{ minutes} = 2 \text{ hours } 26 \text{ minutes}$

### Answer to Level 6 Sample Item 2:

Multiply the length of the field times the width to find the area. Multiply the area times the number of pounds of fertilizer divided by 1,000 square feet. Divide the number of pounds by the number of pounds per bag to get the number of bags of fertilizer needed.

- A. Incorrect:  $360 \div 160 \times 1,000 \div 8 \div 50 = 5.6$ , rounded up to 6 (divided dimensions of field instead of multiplying, multiplied instead of dividing by 1,000, divided instead of multiplying by 8)
- B. Incorrect:  $360 \times 160 \div 8 \div 1,000 = 7.2$ , rounded down to 7 (divided area of field by lbs of fertilizer per 1,000 sq ft instead of multiplying, then divided by 1,000 sq ft; didn't factor in 50-lb bags)

- C. Incorrect:  $360 \times 160 \div 1,000 - 50 = 7.6$ , rounded up to 8, or just used 8 from the problem (divided area of field by 1,000 sq ft, then subtracted 50 instead of dividing and didn't factor in 8 lbs/1,000 sq ft, or just chose 8 because it appears in the problem)
- D. Incorrect:  $(360 \times 160) \times 8 \div 1,000 \div 50 = 9.2$ , rounded down to 9 (rounded down instead of rounding up)
- E. **Correct:**  $360 \text{ ft} \times 160 \text{ ft} \times 8 \text{ lbs fertilizer}/1,000 \text{ sq ft} \div 50 \text{ lb bags} = 9.2$  bags needed, rounded up to 10

### Answer to Level 6 Sample Item 3:

Subtract the lesser price from what the customer paid in order to find the difference. Multiply the difference times 150% (1.50), then subtract this refund amount from what the customer originally paid to find the final cost of the refrigerator.

- A. Incorrect:  $(369 - 335) \times 1.50 = 51.00$  (just found the refund)
- B. Incorrect:  $369 - 150 = 219$  (the percent was used as a dollar amount and subtracted from the amount paid)
- C. **Correct:**  $369 - [(369 - 335) \times 1.50] = 318.00$
- D. Incorrect:  $369 - (369 - 335) = 335.00$  (found the advertised price, or subtracted the difference in prices from the price paid)
- E. Incorrect:  $369 - [(369 - 335) \times 0.15] = 363.90$ , rounded up to 364.00 (changed the percent to a decimal by dividing by 1,000 instead of 100)

## Answers to Applied Mathematics Level 7 Practice Set

### Answer to Level 7 Sample Item 1:

Find the increase in population by subtracting the previous population from the current population. Divide the increase by the previous population and multiply by 100%.

- A. Incorrect:  $318,270 \div 249,583 = 1.275$ ;  $1.275 \times 10 = 12.8\%$ , rounded up to 13% (divided current population by previous population, moved decimal on result by multiplying by 10 instead of 100)
- B. Incorrect:  $318,270 - 249,583 = 68,687$ ;  $68,687 \div 318,270 = .216$ ;  $.216 \times 100\% = 21.6\%$ , rounded up to 22% (divided difference between previous and current populations by current population instead of previous population)
- C. **Correct:**  $318,270 - 249,583 = 68,687$ ;  $68,687 \div 249,583 = .275$ ;  $.275 \times 100\% = 27.5\%$ , rounded up to 28%
- D. Incorrect:  $318,270 - 249,583 = 68,687$ ;  $68,687 \div 1,000 = 68.7\%$ , rounded up to 69% (converted difference between previous and current population to percentage incorrectly)
- E. Incorrect:  $249,583 \div 318,270 = .784$ ;  $.784 \times 100\% = 78.4\%$ , rounded down to 78% (divided previous population by current population)

### Answer to Level 7 Sample Item 2:

Calculate the discount amount by multiplying the price of one case times the discount rate (divided by 100). Subtract the discount amount from the price of one case and multiply times the number of cases. Add the cost of delivery. Do this for both companies and choose the smaller total.

- A. Incorrect:  $\$25.85 - (\$25.85 \times .10) = \$23.27$  or  $\$27.36 - (\$27.36 \times .15) = \underline{\$23.26}$  (net price per case)
- B. Incorrect:  $\$25.85 - (\$25.85 \times .10) + (5 \times \$2.50) = \$35.77$  or  $\$27.36 - (\$27.36 \times .15) + \$10 = \underline{\$33.26}$  (used just one case for price)
- C. Incorrect:  $5 \times (\$25.85 - 10) + (5 \times \$2.50) = \$91.75$  or  $5 \times (\$27.36 - 15) + \$10 = \underline{\$71.80}$  (used percent discount as a dollar amount)
- D. **Correct:**  $5 \times [\$25.85 - (\$25.85 \times .10)] + (5 \times \$2.50) = \$128.83$  or  $5 \times [\$27.36 - (\$27.36 \times .15)] + \$10 = \underline{\$126.28}$
- E. Incorrect:  $5 \times (\$25.85 + \$2.50) = \underline{\$141.75}$  or  $5 \times \$27.36 + \$10 = 146.80$  (did not figure the discounts)

### Answer to Level 7 Sample Item 3:

Determine which wall brackets are needed to give a height of 9 feet (one of each size). Determine how many sets of brackets are needed to support the 10-foot shelves (brackets are needed at the 1, 3, 5, 7, & 9-foot locations along the 10-foot shelves, thus 5 sets are needed). Add the bracket prices together and multiply by the number of sets needed.

- A. Incorrect: 48 in = 4 ft; 60 in = 5 ft; 4 ft + 5 ft = 9 ft height needed;  $(12.95 + 16.95) \times 3 = 89.70$  (just figured cost of 3 sets of brackets when 5 are needed)
- B. Incorrect: 48 in = 4 ft; 60 in = 5 ft; 4 ft + 5 ft = 9 ft height needed;  $(12.95 + 16.95) \times 4 = 119.60$  (just figured cost of 4 sets of brackets when 5 are needed)
- C. Incorrect: 48 in = 4 ft; 4 ft  $\times$  2.5 brackets = 10 ft;  $12.95 \times 2.5 \times 4 = 129.50$  (figured cost for 2½ 48-in sections [giving 10 feet instead of 9 feet]  $\times$  4 sets of brackets, instead of one bracket of each length  $\times$  5)
- D. **Correct:** 48 in = 4 ft; 60 in = 5 ft; 4 ft + 5 ft = 9 ft height needed;  $(12.95 + 16.95) \times 5 = 149.50$
- E. Incorrect: 48 in = 4 ft; 60 in = 5 ft; 4 ft + 5 ft = 9 ft height needed;  $(12.95 + 16.95) \times 6 = 179.40$  (figured cost of 6 sets of brackets when only 5 are needed)



## How the Illinois Learning Standards Align with WorkKeys *Applied Mathematics*

Item Number	Standard(s)	Correct Answer
	<b>Level 3</b>	
1	6A, 6B, 6C	D
2	6A, 6B, 6C	B
3	6A, 6B, 6C	B
	<b>Level 4</b>	
1	6A, 6B, 6C, 6D	C
2	6A, 6B, 6C, 7A	A
3	6A, 6B, 6C, 10A	C
	<b>Level 5</b>	
1	6A, 7A	B
2	6A, 6B, 6C	A
3	6A, 6B, 6C, 6D	C
	<b>Level 6</b>	
1	6A, 6B, 6C, 7A	E
2	6A, 6B, 6C, 7A	E
3	6A, 6B, 6C, 6D	C
	<b>Level 7</b>	
1	6A, 6B, 6C, 6D	C
2	6A, 6B, 6C, 6D	D
3	6A, 6B, 6C, 7A	D

## **WorkKeys Reading for Information Assessment**

Reading for Information is skill in reading and understanding work-related instructions and policies. Such material, known as *procedural* text, differs from the explanatory and narrative text on which most reading programs are based. In addition, unlike reading and content-area texts, which are usually organized to make the reading easy to understand, workplace communication is not necessarily designed to be easy to read. It may even be poorly or unclearly written. These differences can be drawbacks for many employees when reading and understanding much of the material they encounter on the job.

There are five levels in the Reading for Information skill scale, and the skills included can be loosely grouped into four categories:

### **Choosing Main Ideas or Details**

This requires skill at selecting the important information and supporting details from a written document.

Looking for main ideas and details is a common reading task. But, as mentioned previously, reading texts encountered in the workplace differ from the selections most often used in reading programs. In such programs, the main idea is generally found in the topic sentence at the beginning of a paragraph or occasionally in a concluding sentence. However, written communication found in the workplace is often not constructed in such an organized manner. Consequently, the employee needs to be able to use clues other than placement to identify the main ideas and important details.

### **Understanding Word Meanings**

Although some basic vocabulary is involved in this skill area, the emphasis is on using context to determine specific word meanings. The demands of the workplace progress from the need to know simple words and identify definitions clearly stated in the reading to the need to use the context to determine the meanings of more difficult words. Jargon, technical terminology, and words with multiple meanings are used increasingly as the contexts become more complex.

### **Applying Instructions**

Conveying instructions is the principal purpose of a great deal of workplace communication. Skill in applying instructions involves sequencing and generalizing. As in the other skill areas, the workplace requirements range from the simple to the more complex. As the levels increase, the instructions contain more steps and conditionals are added. At the lower levels, employees need only apply instructions to clearly described situations; at the higher levels, employees must apply instructions to less similar, and eventually, to new situations.



## **Applying Information and Reasoning**

Often, for effective performance of a task, it is necessary for employees to apply information given in workplace communications to similar or new situations, to predict consequences of certain actions, and to understand the reasoning, which may or may not be stated, behind a policy. As in the previous category, employees may be asked to apply information and reasoning to clearly described situations at the lower levels while, at higher levels, they must apply information and reasoning to similar and then to new situations.

The practice set gives examples of the reading materials and questions on the WorkKeys *Reading for Information* test.

## WorkKeys Reading for Information Practice Set

This practice set can help you understand the WorkKeys skill levels and give you practice for the actual WorkKeys assessment. However, remember that this practice set is **not** a full-length test and your score is **not** a substitute for the actual WorkKeys test score.

The actual test consists of 33 questions and has a time limit of 45 minutes. Several questions may be grouped together and relate to a single piece of reading material.

WorkKeys Reading for Information is the skill people use when they read and use written text in order to do a job. The written texts include memos, letters, directions, signs, notices, bulletins, policies, and regulations. It is often the case that workplace communications are not necessarily well-written or targeted to the appropriate audience. Reading for Information materials do not include information that is presented graphically, such as in charts, forms, or blueprints. There are five skill levels, from Level 3 to Level 7. As you move from Level 3 to Level 7, both the materials and the tasks become more complex.

## Reading for Information Level 3

Individuals with Level 3 skills understand basic words and can identify main ideas. They understand when to follow each step in a set of instructions and can apply the instructions to situations that are the same as the one they are reading about. Level 3 materials include simple instructions, company policies, and announcements. They are short and straightforward, and contain basic vocabulary.

# MARCO Industries



14428 Del Rio  
San Diego, CA

To: All Employees  
Fr: President's Office  
Re: Holiday Closing

The past year has been a good one for MARCO Industries. Our sales are way up. I believe that there will be more orders for our products in the new year, too.

All of you have worked very hard and should be rewarded. So I have decided to close MARCO Industries from December 24 through January 2. All employees will get a paid vacation during that time. This vacation will not count against your regular paid vacation time. It is a bonus. Simply write "holiday leave" on your time sheets for those dates.

1. Based on this memo, what should you write on your time sheet for December 24 though January 2?
  - A. Bonus sales
  - B. Holiday leave
  - C. Industry closed
  - D. Paid vacation
  - E. Regular vacation

## CLEANROOM PRACTICES

YOU MAY NOT USE ANY COSMETICS IN THE CLEANROOM. YOU MUST CLEAN OFF FACE POWDER, EYE SHADOW, MASCARA, AND LIPSTICK. NON-OIL-BASED LOTIONS ARE ACCEPTABLE BUT SHOULD BE APPLIED BEFORE ENTERING THE MAIN AREA.

TO PREVENT CONTAMINATION OF PRODUCT, NO COLOGNE, PERFUME, HAIR SPRAY, HAIR GEL, OR FINGERNAIL POLISH MAY BE WORN. FINGERNAILS MUST NOT GO MORE THAN 0.25 INCH PAST THE FINGERTIPS AND CANNOT PUNCH THROUGH GLOVES.

THE ONLY METAL ORNAMENT ALLOWED INSIDE THE CLEANROOM IS A WEDDING BAND (WRIST WATCHES ARE NOT ALLOWED). IF THE WEDDING BAND IS NOT SMOOTH, NYLON GLOVES MUST BE WORN UNDER VINYL GLOVES.

2. What type of product can you have in the cleanroom?

- A. Face powder
- B. Fingernail polish
- C. Hair spray
- D. Mild cologne
- E. Non-oil-based lotions

# Hardemat

Department Stores  
Housewares Department

All items in stock must have a sample displayed. The samples must have a scannable bar code on the bottom. Put a hanging price tag on all samples with the regular price displayed. Sale prices should be displayed on a yellow hangtag in a plastic jacket. Finally, post a sign with the regular price on the shelf underneath each sample item.

Cookware sets must have both an eight-piece sample set and a thirteen-piece sample set for display only. Separate the boxes with the cookware sets. Boxes with eight-piece sets must be kept on the shelf above the eight-piece sample set. Boxes with thirteen-piece sets must be kept on the shelf above the thirteen-piece sample set.

3. In the department store where you work, you are asked to mark prices for an upcoming sale. If the thirteen-piece cookware set is going on sale, where should you mark the sale price?
- A. Beside the display on a separate sign
  - B. On a yellow hangtag in a plastic jacket
  - C. On the display items with a yellow marker
  - D. On the regular hanging price tag
  - E. Over the bar code on the bottom of the box

## Reading for Information Level 4

Individuals with Level 4 skills can apply instructions to situations that are the same as the situations in the reading materials. They can identify cause-effect relationships and define words by the context. Level 4 materials may include several details or describe processes involving several steps.

### New Policy

Effective immediately, the following Company Standard for Dress will be in force at all times:

Except on specially designated holidays, business dress attire will always be worn by all upper-level management due to the heavy contact these individuals have with clients and the public. This attire is limited to business suits/slacks for both women and men.

However, casual dress is allowed for all middle-level employees during the core work week (Monday through Thursday). This casual dress will consist of long- or short-sleeved shirts; polo shirts; khaki pants; "dress walking shorts," hemmed at the knee level or lower; and "dress" canvas shoes. Jeans, printed T-shirts, or regular tennis shoes are not allowed on core casual dress days.

Fridays have been officially declared "Jeans Day" here at our company. On Fridays, any kind of jeans are permitted (colored denims, blue jeans, etc.) However, these jeans must be in new or next-to-new condition, with no holes, writing, or other obvious "statement makers." Printed T-shirts and regular tennis shoes are still prohibited on Friday.

1. According to the policy shown, "dress walking shorts" are:
  - A. banned if they are hemmed above the knee.
  - B. banned on Friday unless they are made of colored denim.
  - C. permitted on any Monday through Thursday if worn with a new printed T-shirt.
  - D. permitted only on Friday and must be hemmed below the knee.
  - E. permitted only on Friday if the hemline is at the knee.



**ATTENTION CASHIERS:**

All store employees will now get 20% off all items they buy here. Please follow the new directions listed below.

Selling bicycles and equipment to employees

- Ask to see the employee's store identification card.
- Enter the employee's department code number into the cash register.
- Use the cash register to take 20% off the price. Then push the sales tax button.
- Write your initials on the sales receipt.
- Sell equipment to employees during store hours only.

Accepting returns from employees

- Employees receive a store credit certificate for items they return to the store.
- Store credit certificates are next to the gift certificates.
- Employees may not get a cash refund for items they return to the store.

2. According to the instructions shown, what is the last thing a cashier should do before pushing the sales tax button?
- A. Check the employee's store identification card
  - B. Check the employee's store credit certificate
  - C. Enter the cashier's store identification number into the cash register
  - D. Enter the employee's department code number into the cash register
  - E. Use the cash register to take 20% off the price

Human Resources Office  
Acme Industries

To All Employees:

Our company picnic will have something new—the Toddler Tent. There will be a large sandbox with buckets, shovels, etc. and a large grassy space with plastic, ride-on toys for the children. The area will be enclosed by a fence supporting a large red and white canopy, so the area will be secure and shaded.

For the fun and safety of our youngest family members, be aware of these Toddler Tent rules:

- \* This area is intended for children up to about three years old. There will be a 40-inch high horizontal pole at the Toddler Tent gate. If a child fits under that pole, the child may enter and play inside. If not, then the child may enjoy all of the many other activities that are provided for the bigger kids.
- \* Parents must not leave children unattended in this area; a responsible person must be supervising each child.
- \* All common sense rules of play (no sand throwing, etc.) are to be observed.
- \* All toys are to remain inside the enclosed area.
- \* Each adult is encouraged to be kind and firm in making sure that each child obeys these rules so that our company picnic is safe and enjoyable for every family attending.

If you have any questions or comments, please use the computer in your work station to send an e-mail message to [Chrprsn@acme.com](mailto:Chrprsn@acme.com). In the plant, use the computer provided for your department.



3. Based on this memo, to make a suggestion about the Toddler Tent, an employee would need:
- A. the name of the picnic committee chairperson.
  - B. the phone number for the Toddler Tent organizer.
  - C. to attend a picnic committee meeting.
  - D. to have access to a computer.
  - E. to tell his or her supervisor.



## **Reading for Information Level 5**

Individuals with Level 5 skills can apply information from reading materials to new situations that are similar to those described in the materials and they can understand words and phrases with specialized or multiple meanings. Level 5 materials include company policies, procedures, and announcements. All the information in them is stated clearly and directly, but there are many details.

## Snowmobile Regulations & Safety

- **Snowmobile operators must have a valid state motor vehicle driver's license in their possession.** Persons possessing a learner's permit may operate a snowmobile when supervised one-to-one within line of sight (but no more than 100 yards) by a licensed person 21 years old or older.
- **Maximum speed limit is 45 mph (72 kph) or less where posted or as conditions warrant.** Speed is checked by radar. Obey all speed limit signs and stop signs.
- Snowmobiles must be registered according to applicable state law. Muffler, lights, and brakes must be in good working condition.
- Snowmobile exhaust and muffler systems must be in good working order. The maximum noise allowed is 78 decibels when measured during full acceleration at a distance of 50 feet. Snowmobiles exceeding the decibel standard will be denied entry into the park.
- **If bison or other wildlife are on the road**, stop at least 25 yards away and/or pull your machine as far as possible to the opposite side of the road; give them a chance to get off the road. **If they run toward you**, and you can confidently turn around, do so and move to a safe place to reassess the situation. **If they walk or run toward you**, and you cannot turn around, get off your machine and stand to the side of it, keeping the machine between you and the animal(s). **If they are standing calmly**, inch toward them and assess their behavior. If they remain calm, pass on the opposite side of the road at a moderate speed. Do not make sudden or erratic movements; use groomed pullouts where possible. If the animal(s) appear agitated, do not attempt to pass as any advance may cause the animal(s) to charge. Do not chase animals or cause them to stampede.

Adapted from: National Park Service. "Official Website of Yellowstone National Park" (see "planning a visit," then "things to do," "winter activities," "rules and regulations," and "snowmobiling"). Retrieved August 15, 2001, from <http://www.nps.gov/yell/planvisit/todo/winter/snowmobile.htm>.

1. You are a park ranger. A person wants to enter the park riding a snowmobile that you suspect is too loud. To determine whether the snowmobile's noise is too loud as specified by the guidelines shown, you should ask the person to:
  - A. check the snowmobile's decibel level at a speed of at least 25 miles per hour.
  - B. demonstrate that the exhaust and muffler systems are in good working order.
  - C. run the snowmobile at a speed no greater than 45 miles per hour (72 kilometers per hour).
  - D. run the snowmobile at full acceleration while you test the decibel level from 50 feet away.
  - E. show a driver's license or learner's permit and snowmobile registration.



## First Responder Legal and Ethical Rights

Many First Responders are concerned about lawsuits. Lawsuits against those who give care at the scene of an emergency are not often successful. The First Responder's scope of practice is defined as the range of duties and skills a First Responder is allowed and expected to perform when necessary. The First Responder, like other out-of-hospital care providers, is governed by legal, ethical and medical guidelines. These guidelines establish the scope and the limits of care the first responder provides. While on duty, the First Responder has an obligation to respond to an emergency and provide care at the scene; this obligation is called a duty to act. This duty is governed either by case law, statute, or job description. This duty applies to public safety officials, certain government employees, licensed and certified professionals and medical paraprofessionals while on duty. If a First Responder sees a motor vehicle crash while driving to work, in most states he or she only has a moral obligation to stop. However, once a First Responder has begun care, he or she is legally obligated to continue providing care until care can be transferred to a person with equal or greater training.

A conscious victim has a basic right to decide what can and cannot be done to his or her body. Therefore to provide care for an ill or injured person, the responder must first obtain that person's consent. Permission is implied if the victim is unconscious or is a child with a serious condition and no supervising adult present. Consequently the responder is only negligent if he or she does not respond in a professional manner or fails to act within this duty, thus causing physical injury, which can be measured in financial terms.

2. An off-duty First Responder stops at a construction site to help a worker who has fallen from a scaffold. According to the policy shown, the First Responder must remain on duty with the injured worker until:
- A. a crew member who is not a First Responder agrees to watch over the victim until help arrives.
  - B. another equally or more skilled person arrives and takes over.
  - C. the Responder has done everything within his or her skill limits to help the worker.
  - D. the Responder must leave because of other obligations.
  - E. the Responder has met his or her moral obligation.

## **Notice of Workstation Replacement** *-Timing and Procedures-*

Master Industries' Management Information Systems (MIS) department will undertake a firm-wide upgrade of computer workstations over the course of five weeks beginning at the first of next month. Due to the age of the existing workstations, full replacement of the hardware will occur rather than internal system modifications. This will cause some disruption in normal work and the need for care in the preservation of existing software and data. This memo is intended to outline timing and procedures for upgrade.

Workstation replacement will occur on the following timetable. Week 1: Finance and Marketing departments. Week 2: Public Affairs and Human Resources departments. Week 3: Service and Customer-Relations departments. Week 4: R and D department. Week 5: Tweaking and troubleshooting in all departments.

In the week prior to the week in which your department is scheduled for workstation replacement, please do the following: (1) Complete the Software Inventory Questionnaire (SIQ) sent to you with this memo, which will affirm which software packages you wish to retain when you get your new workstation, and forward the SIQ to MIS. (2) Using the File Manager software accessory currently on your workstation, copy all data that you wish to preserve from your local hard drive to the network (F) drive. MIS staff will assist you with this, if necessary, and will transfer the data back to your new local workstation after the upgrade, if desired. (3) Delete or transfer to CDs any non-work-related data and other unnecessary data from your local workstation. It will be very difficult to retrieve data from your old workstation after it is removed from your workspace; therefore MIS asks your cooperation in giving high priority to the procedures outlined here.

3. Based on this notice, the purpose of the SIQ is to:
  - A. inform the MIS department regarding the type of data to be transferred to the network.
  - B. list the software each workstation user will need to keep.
  - C. relieve anxiety over the upcoming workstation upgrades.
  - D. schedule an appointment for each employee's workstation upgrade.
  - E. specify problems to be dealt with during the final troubleshooting phase of the upgrade.

## Reading for Information Level 6

Individuals with Level 6 skills can read and understand complex documents and generalize from the materials to new situations. They can correctly apply complex instructions from these materials and understand the rationale behind policies and procedures described in the materials. Level 6 materials may include complex regulatory and legal documents, and rental agreements.

### ORDINANCE #6: FIRE REGULATIONS CHAPTER 5: FIRE INSPECTIONS

**6-5-1 *Nationally Recognized Standards.*** Where no applicable standards are set forth or contained within other laws, codes, regulations, ordinances or bylaws adopted by the jurisdiction, any local codes passed to ensure compliance with applicable standards of the National Fire Protection Association or compliance with other nationally recognized fire-safety standards approved by the Chief shall be deemed prima facie evidence of compliance with the intent of this ordinance.

**6-5-2 *Alternate Methods.*** The Chief is authorized to modify any of the provisions of local fire prevention codes and ordinances upon application in writing by the owner, a lessee, or a duly authorized representative where there are practical difficulties in the way of carrying out the provisions of said code or ordinance, provided that the spirit of the code or ordinance shall be complied with, public safety secured, and substantial justice done. The particulars of such modification and the decision of the Chief shall be entered upon the records of the department and a signed copy shall be furnished to the applicant.

**6-5-3 *Technical Assistance.*** To determine the acceptability of technologies, processes, products, facilities, materials, and uses attending the design, operation, or use of a building or premises subject to the inspection of the department, the Chief is authorized to require the owner or the person in possession or control of the building or premises to provide, without charge to the jurisdiction, a technical opinion and report. The opinion and report shall be prepared by a qualified engineer, specialist, or laboratory/fire-safety specialty organization acceptable to the Chief and the owner, and shall analyze the fire-safety properties of the design, operation, or use of the building or premises and the facilities and appurtenances situated thereon, to recommend necessary changes.

1. Your company has been renting out an old maintenance/storage building but now needs to use it as additional office space. The building has recently failed the official fire safety inspection. What should your company do next?
  - A. Ask your authorized representative to modify the existing code
  - B. Give up any plans for remodeling these facilities to house new office space
  - C. Hire an expert approved by the Chief to submit a report with recommendations
  - D. Remind the inspector that the Chief operates under standards as high as those of the National Fire Protection Association
  - E. Submit to the inspector a description of how long the current tenant has been safely using these premises

### **Section 199.781**

- (1) A multiple lift shall only be performed if the following criteria are met:
  - (i) A multiple lift rigging assembly is used;
  - (ii) A maximum of five members are hoisted per lift;
  - (iii) Only beams and similar steel structural members are lifted; and
  - (iv) All employees engaged in the multiple lift have been trained in these procedures.
  - (v) No crane is permitted to be used for a multiple lift where such use is contrary to the manufacturer's specifications and limitations.
- (2) Components of the multiple lift rigging assembly shall be specifically designed and assembled with a maximum capacity for total assembly and for each individual attachment point. This capacity, certified by the manufacturer or a qualified rigger, shall be based on the manufacturer's specifications with a 5-to-1 safety factor for all components.
- (3) The total load shall not exceed:
  - (i) The rated capacity of the hoisting equipment specified in the hoisting equipment load charts;
  - (ii) The rigging capacity specified in the rigging rating chart.
- (4) The multiple lift rigging assembly shall be rigged with members:
  - (i) Attached at their center of gravity and maintained reasonably level;
  - (ii) Rigged from top down; and
  - (iii) Rigged at least 7 feet apart.
- (5) The members on the multiple lift rigging assembly shall be set from the bottom up.
- (6) Controlled load lowering shall be used whenever the load is over the connectors.

2. As a construction worker, you are assisting with a multiple lift of six steel beams. The rigged members are rigged 8 feet apart and attached at their center of gravity. The multiple lift is NOT lawful under Section 199.781, as shown, because the:
- A. multiple lift has too few beams.
  - B. multiple lift has too many beams.
  - C. rigged members are too close together.
  - D. rigged members are too far apart.
  - E. rigged members should not be attached at their center of gravity.



Paul Browne, Chief Executive Officer  
House of Browne  
1234 Fifth Avenue  
New York, NY 10003

Dear Mr. Browne:

Our two organizations have enjoyed an era of mutually profitable alliance. Our sterling reputation for collections of trendsetting and yet classic clothing which affords the wearer the greatest comfort and confidence simultaneously combined with your renown as a master couturier who creates apparel of unique distinction and superlative quality have forged a valuable relationship. The longevity of this liaison is unsurpassed in our industry.

But, of late, we have been confronted with an unprecedented predicament that must be immediately addressed. Several patrons have returned recently purchased garments with splintered buttons, inoperative zippers, or disengaged seams. To discover if these were isolated deficiencies, several of our ensemble design assistants randomly selected a score of items from your latest shipment for inspection. After a cursory examination, nine defects were discovered on seven garments. More extensive scrutiny exposed more imperfections on those seven garments and on an additional five garments. Sixty percent of the apparel items examined failed to meet the criteria for presentation in our salon, with most of those items having numerable defects. Based on our previous experience with House of Browne, we would have characterized this scenario as inconceivable. Now that it has been discovered, its prolongation is unequivocally impermissible.

Hence, within the week, we will return by special courier the bulk of your most recent delivery. We assume that within your organization a meticulous investigation will be conducted, and a retooled process put in place effectuating output that will once again be of the preeminent caliber we have come to expect. If our business association were not so tenaciously grounded in years of reciprocal regard, we would currently be engaged in a quest for a more reliable couturier without prior notification. Recompense or repair is not expected; restoration of excellence is.

Sincerely,

*Celine Marceau*

Celine Marceau  
Proprietor, Elegance Unlimited

- 3.** According to the letter shown, Celine Marceau wants Paul Browne to:
- A.** assist her in finding a new couturier who is more reliable.
  - B.** fire the employee(s) responsible for the defective merchandise.
  - C.** improve the quality of future merchandise shipments.
  - D.** refund her payment for the defective merchandise.
  - E.** return the merchandise to her after repairs have been made.



## Reading for Information Level 7

Individuals with Level 7 skills can figure out the underlying principles in complex documents and apply them to situations that are quite different from any described in the materials. They can understand unfamiliar terms from the context. Level 7 materials are densely detailed passages, such as excerpts from complex regulatory and legal documents. They contain complicated concepts and procedures. The language includes jargon and technical terms.

### *BUILDING INSPECTION AGREEMENT*

#### *PURPOSE*

The purpose of the Inspection is to provide the Client with an objective evaluation of the property's functional condition. The Inspection Report is the exclusive property of the Client and is not assignable. The Inspection Company eschews coadjudicating any subsequent negotiations resulting from information available in the Report. The Report is tendered on an opinion only basis, is irrelative and independent of any real estate contract or other agreements, and does not designate or assign responsibility for repairs to any party. The Report is in no way an advocacy or admonition regarding the purchase of the property nor an assessment of marketability or value.

#### *SCOPE*

The inspection scope is a visual perusal of the main components and systems manifest in the building and does not include technical testing, measurement, or evaluation; nor is it intended as a complete detailed inventory of minor repairs, cosmetic items, or routine maintenance requirements; rather it is intended primarily to uncover major repair items, potential problems, and safety concerns. *Specifically excluded from this Inspection is: testing or evaluating radon, asbestos, electromagnetic field, toxic content or lead in building material, termite or insect infestation, geological or soil stability, code or zoning violations, off-site conditions, septic systems, water wells, irrigation systems, heat exchanger or carbon monoxide testing, free-standing appliances, microwave ovens, water softeners, security systems, timers, or electronics.* The Inspection does not include any component not exposed to view as the inspector does not dismantle any part of the structure or move contents to inspect. The inspector is a building inspector generalist and is not a licensed engineer or expert in every trade. The inspector may recommend further evaluation of a component at Client's expense. Repair costs, if given, are estimates only and should be determined by a qualified contractor prior to final commitment.

#### *LIMITS OF LIABILITY*

*The Inspection Company agrees to conscientiously apply its experience and training to provide an objective visual inspection of the property and warrants that it has no interest in the property. No other warranty or liability is expressed or implied by this Agreement. The Report is not a home warranty nor is there assurance that items found acceptable shall remain so for any period of time. Client understands that this is a limited-time-period general inspection and that further technical inspection of any component is available at additional cost. Client agrees not to hold Inspection Company liable for any unintentional or non-negligent oversight. Client agrees to not subpoena the Inspection Company to testify on matters related to this inspection or to reimburse the Inspection Company for expert witness services.*

**Standard Arbitration Clause: Any controversy or claim arising out of or relating to this contract, or breach thereof, shall be settled by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.**

1. You are a real estate agent. Your client's house is scheduled for an inspection paid for by a potential buyer. What action should you recommend that your client take before the inspection?
- A. Buy new insulating drapes for the living room
  - B. Fix the broken handrail on the front steps
  - C. Hire an exterminator
  - D. Mend a burned spot in the carpet
  - E. Replace the noisy, unreliable refrigerator

### **321E.8 Annual permits.**

Subject to the discretion and judgment provided for in section 321E.1, annual permits shall be issued in accordance with the following provisions:

1. Vehicles with indivisible loads having an overall width not to exceed twelve feet five inches or mobile homes including appurtenances not to exceed twelve feet five inches and an overall length not to exceed seventy-five feet zero inches may be moved for unlimited distances. The vehicle and load shall not exceed the height of thirteen feet ten inches and the total gross weight as prescribed in section 321.463.

2. Vehicles with indivisible loads, including mobile homes and factory-built structures, having an overall width not to exceed sixteen feet zero inches and an overall length not to exceed one hundred feet zero inches may be moved under an annual or all-systems permit and must have a route specified by the issuing authority prior to the movement. However, vehicles with indivisible loads, including mobile homes and factory-built structures, with an overall width not exceeding fourteen feet six inches may exceed fifty miles under an annual and all-systems permit when prior approval for trip routing is obtained from the issuing authority. The vehicle and load shall not exceed the height as prescribed in section 321.456 and the total gross weight as prescribed in section 321.463.

3. Vehicles with indivisible loads having an overall length not to exceed one hundred feet zero inches shall be restricted to trip distances not to exceed fifty highway and street miles in total aggregate. The vehicle and load shall not exceed the width as prescribed in section 321.454, the height as prescribed in section 321.456 and the total gross weight as prescribed in section 321.463.

4. All movements of mobile homes and other vehicles the width of which, including any load, exceeds the roadway lane width of the street or highway being traversed, shall be under escort, except that mobile homes and other factory-built structures with an overall width not exceeding sixteen feet six inches shall not be required to have an escort if travel is on an interstate or four-lane highway and if the mobile home or factory-built structure displays an amber revolving light or strobe light on the rear of the mobile home or factory-built structure and if the toting vehicle also displays an amber revolving light or strobe light.

2. As it is used in 321E.8, section 3, **aggregate** means:

- A. allocation.
- B. arrangement.
- C. increase in mass.
- D. road material.
- E. sum of parts.

To: Product Accounting Departments  
From: Regional Information Systems Department  
Subject: Omni Project

As most of you are undoubtedly aware, we are reengineering our Yearly Profit Plan methodology concurrent with the implementation next year of our new enterprise-wide Omni MRPII computerized information system (Omni Project). Omni will supplant the company's ALA Logistics System as well as all other Legacy information systems that are described in the next paragraph and that are used currently by our Accounting and Finance organization.

Today, each Product Line Budget Owner develops their YPP based on input from several information systems. That Owner's expense information is estimated and uploaded into IFPS (Integrated Financial Planning System). IFPS then accumulates actual expenses during the fiscal year, directly from the two Service divisions' monthly cross-charges:

Corporate *Central Services* (CCS) expense charge components flow into the IFPS via cross-charges. CCS is responsible for servicing the CFM information system, which is Corporate Central Services' primary accounting system. CFM interfaces directly into IFPS. Corporate *Professional Services* (CPS) cross-charges use standard cost elements based on units. Each month, these units are accumulated in the PSFM (Professional Services Financial Management) information system and charged out via interface to IFPS.

All Accounting and Finance information systems mentioned above will be supplanted.

On the revenue side, Sales and Miscellaneous Revenue (S&MR) for each Product flows to IFPS via interface from the Order/Invoice system. We are not supplanting the O/I system at this time due to incompatibilities with our trade discount practices.

You must begin preparing for the conversion now. You will have new allocation methodologies from CCS which may affect the expense you show at the Product level. To operate in Omni at the level we need, months of study will be required. This total rollout will require Product Accounting to plan at the same level of detail as CCS and CPS and use the same object of measure, either dollars or units. Finally, Consumer Products will experience cutover to Omni first, five months prior to fiscal year-end, requiring their budget to be developed in Legacy for the first seven months and in Omni for the remainder. Professional Products and Educational Products will cut over concurrent with their fiscal year, requiring the next YPP to be done in Omni only.

We will be coordinating training plans for the conversion with your respective Information Systems department as the rollout progresses. Please contact your IS department manager if you have further questions.

3. What problem is the Omni Project designed to solve?
- A. An overly complicated flow of data
  - B. An unevenly split (5/7) fiscal year
  - C. Incompatibilities in the company's trade discount practices
  - D. The existence of two Service divisions
  - E. Uncoordinated implementation of new allocation methodologies for Consumer Products
-

## Answers to Reading for Information Level 3 Practice Set

### Answer to Level 3 Sample Item 1

- A. Incorrect. *Bonus sales*. The memo says employees deserve a bonus, but the time is to be recorded as “holiday leave.”
- B. **Correct.** *Holiday leave*. The memo says the time is to be recorded as “holiday leave.”
- C. Incorrect. *Industry closed*. MARCO Industries will be closed, but the time is to be recorded as “holiday leave.”
- D. Incorrect. *Paid vacation*. Employees will get the time as paid vacation, but it is to be recorded as “holiday leave.”
- E. Incorrect. *Regular vacation*. The memo says this time will not be part of regular vacation and is to be recorded as “holiday leave.”

### Answer to Level 3 Sample Item 2

- A. Incorrect. *Face powder*. The instructions state: "You must clean off face powder, eye shadow, mascara, and lipstick."
- B. Incorrect. *Fingernail polish*. The instructions state "no cologne, perfume, hair spray, hair gel, or fingernail polish may be worn."
- C. Incorrect. *Hair spray*. The instructions state "no cologne, perfume, hair spray, hair gel, or fingernail polish may be worn."
- D. Incorrect. *Mild cologne*. The instructions state "no cologne, perfume, hair spray, hair gel, or fingernail polish may be worn."
- E. **Correct.** *Non-oil-based lotions*. The instructions state "Non-oil-based lotions are acceptable but should be applied before entering the main area."

### Answer to Level 3 Sample Item 3

- A. Incorrect. *Beside the display on a separate sign*. Price signs should be posted below the item on the shelf but not beside it.
- B. **Correct.** *On a yellow hangtag in a plastic jacket*. The notice states: “Sale prices should be displayed on a yellow hangtag in a plastic jacket.”
- C. Incorrect. *On the display items with a yellow marker*. A yellow hangtag is mentioned, but not a yellow marker. This may seem reasonable since the samples are just for display, but is it not suggested in the reading.
- D. Incorrect. *On the regular hanging price tag*. The notice makes it clear that sale prices are put on a separate tag. It states: “Put a hanging price tag on all samples with the regular price displayed. Sale prices should be displayed on a yellow hangtag in a plastic jacket.”
- E. Incorrect. *Over the bar code on the bottom of the box*. The samples must have a scannable barcode on the bottom but this may be price or stock number or both. There is no instruction to change this in case of a sale.

## Answers to Reading for Information Level 4 Practice Set

### Answer to Level 4 Sample Item 1

- A. **Correct.** *Banned if they are hemmed above the knee.* These shorts are too short on any day.
- B. Incorrect. *Banned on Friday unless they are made of colored denim.* Jeans are permitted on Friday, but the memo doesn't say dress shorts are then banned.
- C. Incorrect. *Permitted on any Monday through Thursday if worn with a new printed T-shirt.* Printed T-shirts are banned every day.
- D. Incorrect. *Permitted only on Friday and must be hemmed below the knee.* For some employees, they are also allowed Monday through Thursday.
- E. Incorrect. *Permitted only on Friday if the hemline is at the knee.* For some employees, they are allowed Monday through Thursday at this hemline level.

### Answer to Level 4 Sample Item 2

- A. Incorrect. *Check the employee's store identification card.* This is the first step to take as the transaction begins and is several steps before the sales tax button is pushed.
- B. Incorrect. *Check the employee's store credit certificate.* The store credit certificate is mentioned as being given in lieu of a refund; checking the certificate is not part of the instructions for the cashier before pushing the sales tax button.
- C. Incorrect. *Enter the cashier's store identification number into the cash register.* According to the memo, the cashier does not enter his or her ID number.
- D. Incorrect. *Enter the employee's department code number into the cash register.* The cashier has to enter the department code number two steps before pushing the sales tax button.
- E. **Correct.** *Use the cash register to take 20% off the price.* The memo states: "Use the cash register to take 20% off the price. Then push the sales tax button."

### Answer to Level 4 Sample Item 3

- A. Incorrect. *The name of the picnic committee chairperson.* The chairperson is the contact based on the e-mail address, but the address is all that is really needed.
- B. Incorrect. *The phone number for the Toddler Tent organizer.* The employee is asked to e-mail, not phone, with any questions or comments.
- C. Incorrect. *To attend a picnic committee meeting.* Sending an e-mail message does not require attending a meeting.
- D. **Correct.** *To have access to a computer.* The notice states, "please use the computer in your workstation to send an e-mail message to [Chrprsn@acme.com](mailto:Chrprsn@acme.com)."
- E. Incorrect. *To tell his or her supervisor.* Supervision is only mentioned in connection with the children, not the employees.

## Answers to Reading for Information Level 5 Practice Set

### Answer to Level 5 Sample Item 1

- A. Incorrect. *Check the snowmobile's decibel level at a speed of at least 25 miles per hour.* The regulations state that you should stop at least 25 yards away from wildlife on the road; maximum noise is measured during full acceleration of the snowmobile at a distance of 50 feet.
- B. Incorrect. *Demonstrate that the exhaust and muffler systems are in good working order.* The regulations state that the exhaust and muffler systems must be in good working order, but this is not how you would test the noise level.
- C. Incorrect. *Run the snowmobile at a speed no greater than 45 miles per hour (72 kilometers per hour).* The speed limit stated in the regulations is 45 mph (72 kph), but this is not how you would test the noise level.
- D. **Correct.** *Run the snowmobile at full acceleration while you test the decibel level from 50 feet away.* The regulations state: "The maximum noise allowed is 78 decibels when measured during full acceleration at a distance of 50 feet."
- E. Incorrect. *Show a driver's license or learner's permit and snowmobile registration.* The regulations state the need for a driver's license or learner's permit and registration, but this is not how you would test the noise level.

### Answer to Level 5 Sample Item 2

- A. Incorrect. *A crew member who is not a First Responder agrees to watch over the victim until help arrives.* According to the policy, "once a First Responder has begun care, he or she is legally obligated to continue providing care until care can be transferred to a person with equal or greater training."
- B. **Correct.** *Another equally or more skilled person arrives and takes over.* According to the policy, "once a First Responder has begun care, he or she is legally obligated to continue providing care until care can be transferred to a person with equal or greater training."
- C. Incorrect. *The Responder has done everything within his or her skill limits to help the worker.* He or she must "continue providing care" until someone else takes over.
- D. Incorrect. *The Responder must leave because of other obligations.* He or she is "legally obligated" to continue providing care - other commitments don't matter once the Responder has begun care.
- E. Incorrect. *The Responder has met his or her moral obligation.* The moral obligation only applies to stopping in the first place and it also varies from state to state.



### Answer to Level 5 Sample Item 3

- A. Incorrect. *Inform the MIS department regarding the type of data to be transferred to the network.* The SIQ is related to the process of retaining software, not to transferring data to the network.
- B. **Correct.** *List the software each workstation user will need to keep.* The notice states that the Software Inventory Questionnaire... “will affirm which software packages you wish to retain when you get your new workstation.”
- C. Incorrect. *Relieve anxiety over the upcoming workstation upgrades.* The purpose of the notice may be to relieve anxiety about the replacement, but the SIQ simply records software to be retained.
- D. Incorrect. *Schedule an appointment for each employee’s workstation upgrade.* The general schedule is described in the second paragraph; no mention is made of a specific time.
- E. Incorrect. *Specify problems to be dealt with during the final troubleshooting phase of the upgrade.* The SIQ is not linked to troubleshooting.

## Answers to Reading for Information Level 6 Practice Set

### Answer to Level 6 Sample Item 1

- A. Incorrect. *Ask your authorized representative to modify the existing code.* Under certain conditions you can have an authorized representative apply in writing to the Chief, who can then modify the code based on circumstances. But your representative has no power to modify the code.
- B. Incorrect. *Give up any plans for remodeling these facilities to house new office space.* Before giving up, the technical report should be tried.
- C. **Correct.** *Hire an expert approved by the Chief to submit a report with recommendations.* A specialist in fire safety approved by the Chief, as stated in the passage, can submit a report to justify a new use of a building.
- D. Incorrect. *Remind the inspector that the Chief operates under standards as high as those of the National Fire Protection Association.* This is true but irrelevant.
- E. Incorrect. *Submit to the inspector a description of how long the current tenant has been safely using these premises.* Such an informal description is not the same as the technical report the passage describes.

## Answer to Level 6 Sample Item 2

- A. Incorrect. *Multiple lift has too few beams.* No minimum number of beams is given.
- B. **Correct.** *Multiple lift has too many beams.* The Section does state a maximum number of five.
- C. Incorrect. *Rigged members are too close together.* The rigged members must be at least 7 feet apart, so 8 feet is sufficient.
- D. Incorrect. *Rigged members are too far apart.* The Section does not state a rule with this kind of limit to the rigging spacing.
- E. Incorrect. *Rigged members should not be attached at their center of gravity.* The Section states that the members should be attached at their center of gravity.

## Answer to Level 6 Sample Item 3

- A. Incorrect. *Assist her in finding a new couturier who is more reliable.* Celine states that if it weren't for their longstanding relationship, she *would* be looking for a new couturier, and the phrase "more reliable couturier" appears in the letter, but the letter does not state that Celine is currently looking for a new couturier.
- B. Incorrect. *Fire the employee(s) responsible for the defective merchandise.* There is no mention of this in the letter.
- C. **Correct.** *Improve the quality of future merchandise shipments.* This is the best answer because in the last sentence, Celine states that "restoration of excellence" is expected.
- D. Incorrect. *Refund her payment for the defective merchandise.* In the last sentence, Celine states that "recompense or repair is not expected;...."
- E. Incorrect. *Return the merchandise to her after repairs have been made.* In the last sentence, Celine states that, "Recompense or repair is not expected;...."

## Answers to Reading for Information Level 7 Practice Set

### Answer to Level 7 Sample Item 1

- A. Incorrect. *Buy new insulating drapes for the living room.* The agreement states that the inspection is not aimed at "cosmetic items."
- B. **Correct.** *Fix the broken handrail on the front steps.* The inspection is aimed at "safety concerns" among other things.
- C. Incorrect. *Hire an exterminator.* The inspection does not cover termite or insect infestation.
- D. Incorrect. *Mend a burned spot in the carpet.* The agreement states that the inspection is not aimed at "cosmetic items."
- E. Incorrect. *Replace the noisy, unreliable refrigerator.* The agreement does not cover free-standing appliances.

### Answer to Level 7 Sample Item 2

- A. Incorrect. *Allocation*. Allocation refers to distribution. “Total aggregate” of mileage used in this context would refer to a sum.
- B. Incorrect. *Arrangement*. An arrangement is something put together in proper order. The text implies that the mileage is to be added together, but does not specify an arrangement of the mileage.
- C. Incorrect. *Increase in mass*. Mass usually refers to a quantity or aggregate of matter, not distance in miles.
- D. Incorrect. *Road material*. Road material can be composed of aggregate material, but in this context, the term “aggregate” refers to mileage.
- E. **Correct.** *Sum of parts*. “Vehicles...shall be restricted to trip distances not to exceed fifty highway and street miles in total aggregate,” shows the term “aggregate” referring to mileage. In this context, “aggregate” would mean “the whole sum or amount: sum total,” according to *Merriam-Webster’s Collegiate Dictionary*, Tenth Edition.

### Answer to Level 7 Sample Item 3

- A. **Correct.** *An overly complicated flow of data*. Having too many information systems has created a situation that requires most of them be replaced.
- B. Incorrect. *An unevenly split (5/7) fiscal year*. The reference to a five month/seven month split in a fiscal year refers to an effect of converting to the Omni system, not a cause.
- C. Incorrect. *Incompatibilities in the company’s trade discount practices*. This is merely a reason not to do a complete replacement of the O/I system once the conversion to Omni is begun.
- D. Incorrect. *The existence of two Service divisions*. The passage does not state or imply elimination of THIS situation.
- E. Incorrect. *Uncoordinated implementation of new allocation methodologies for Consumer Products*. The uncoordinated implementation would be a result of switching to Omni.



**How the Illinois Learning Standards  
Align with WorkKeys *Reading for Information***

<b>Item Number</b>	<b>Standard(s)</b>	<b>Correct Answer</b>
	<b>Level 3</b>	
<b>1</b>	1B, 1C	B
<b>2</b>	1B, 1C	E
<b>3</b>	1B, 1C	B
	<b>Level 4</b>	
<b>1</b>	1A, 1B, 1C	A
<b>2</b>	1B, 1C	E
<b>3</b>	1B, 1C	D
	<b>Level 5</b>	
<b>1</b>	1B, 1C	D
<b>2</b>	1B, 1C	B
<b>3</b>	1A, 1B, 1C, 5B	B
	<b>Level 6</b>	
<b>1</b>	1B, 1C, 5B	C
<b>2</b>	1B, 1C, 5B	B
<b>3</b>	1B, 1C, 5B	C
	<b>Level 7</b>	
<b>1</b>	1B, 1C, 5B	B
<b>2</b>	1A, 1B, 1C, 5B	E
<b>3</b>	1B, 1C, 5B	A



# **ISBE-Developed Social Science**





# ISBE-Developed Social Science Assessment

The social science section of the PSAE has one component: an ISBE-developed multiple-choice assessment that you will take on Day 2 of the PSAE. It consists of 65 questions. You will have 60 minutes to complete the assessment.

All questions included on the PSAE social science test are based on the Illinois Learning Standards for social science. The questions are distributed relatively equally among the social science Standards. Many questions address more than one Standard.

Questions are grouped into three major categories: social science disciplines, geography, and history.

**Social Science** The social science disciplines include the study of political, economic, and social systems. The Standards for political systems cover the basic principles and traditions of the U.S. government, the structure and functions of government, the election process, and foreign policy.

The Standards for economics require you to understand economic systems and the nature of the U.S. economy, which includes choices people make in the production and distribution of goods and services and the relationship of

governments to trade and economic practices.

The Standards for social systems require you to compare characteristics of cultures: language, literature, arts, use of technology, and the nature of institutions. The test questions also assess your understanding of the roles of individuals and groups in society and the development of social systems over time.

**Geography** The Standards for geography require you to be able to locate places, regions, and features; to know characteristics of the Earth's physical system and the relationship between geographic factors and society; and to understand the historical significance of geography.

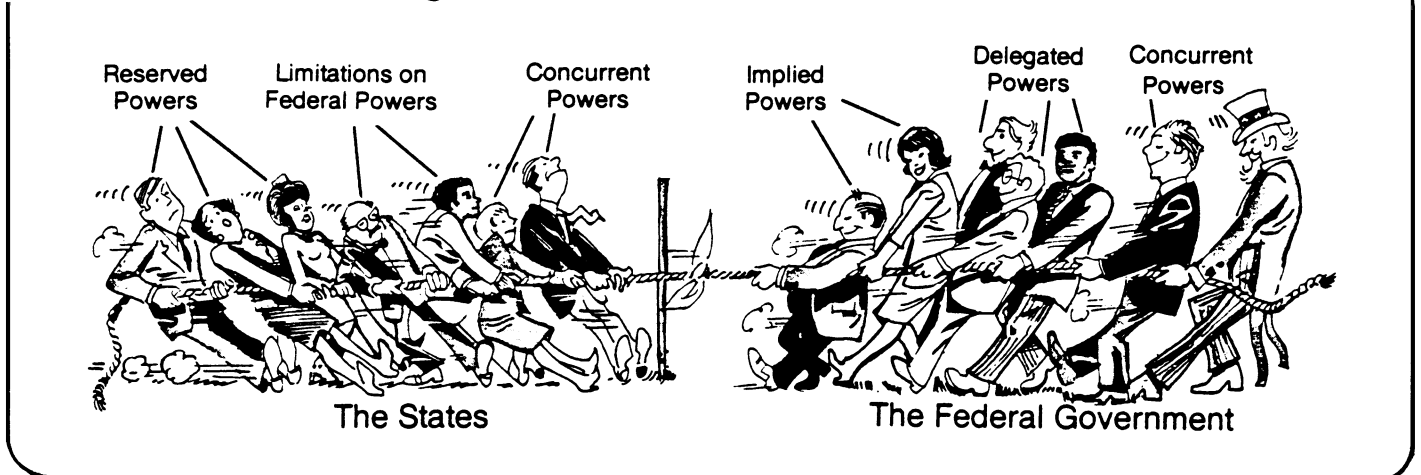
**History** The Standards for U.S. and world history require you to use historical skills and analysis, understand historical events, and understand the development of political, economic, and social systems.

Pages 119–128 contain 35 sample questions that were written for the ISBE-developed social science test. Following the samples, you will find a key on page 130 that gives the correct answer for each question and identifies the Standard or Standards with which the question is aligned.



Use the cartoon to answer the next 3 questions.

## States' Rights—A Losing Battle

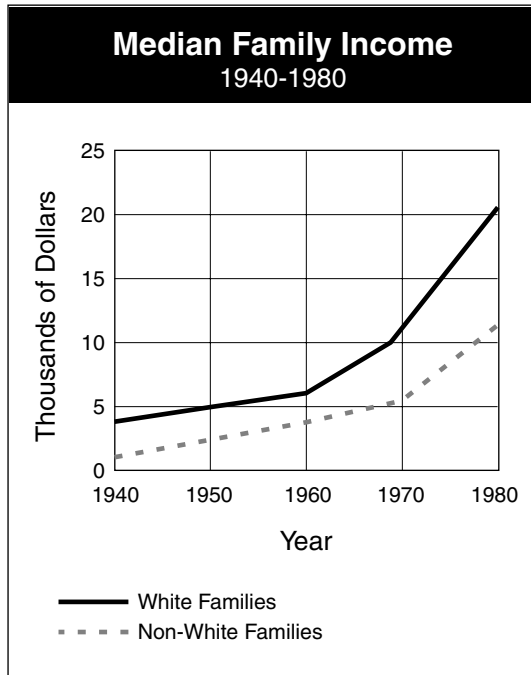


Source: *USA Readings, Documents and Activities* by Phillip L. Groisser and Sol Levine. Courtesy of Amsco School Publications, Inc., New York.

1. What is the main idea of the cartoon?
  - A. The powers of the federal government are entirely distinct from those of state governments.
  - B. The state retains most power in our system of federalism.
  - C. While federal and state governments share powers under federalism, the federal government is dominant.
  - D. Under federalism, the central and state governments share power equally.
2. Which powers are giving the federal government the strength to win the “tug of war”?
  - A. Concurrent
  - B. Implied and delegated
  - C. Reserved
  - D. Implied and reserved
3. Which of these is an example of concurrent powers?
  - A. Coining money
  - B. Controlling U.S. citizenship
  - C. Collecting taxes
  - D. Creating a national bank

4. Which of the following best describes the rule of law principle?
- A. Laws are for the well-being of some of the people.
  - B. The laws are made by the majority for the minority.
  - C. No person is above the law, but all are subject to the law.
  - D. Government officials can take the law into their own hands.
5. Which of the following are within the power of the Supreme Court?
- A. Approving a treaty regarding the placement of American troops in Saudi Arabia
  - B. Deciding if a treaty dealing with Saudi Arabia legally permits United States soldiers to be commanded by the United Nations
  - C. Renegotiating an existing treaty with Saudi Arabia
  - D. Controlling appropriations needed for carrying out a treaty dealing with Saudi Arabia
6. Which best describes the concept of popular sovereignty?
- A. A religion chosen by the government to be followed by the people
  - B. A government's ability to persuade people to do what it wants
  - C. The government power that is derived from the consent of the governed
  - D. The idea that members of government can be re-elected an unlimited number of times
7. The most important function of the Federal Reserve System is to
- A. control the supply of money in the economy.
  - B. insure bank deposits of individuals and businesses.
  - C. loan money to individuals and businesses.
  - D. approve the establishment of local banks.
8. On which issue would a steelworker's union and a large steel corporation most likely agree?
- A. The extent of automation in the production of steel
  - B. The salaries paid to unskilled steelworkers
  - C. The necessity for limits on steel imports
  - D. The length of the workday in the steel plants
9. Which country has a command economic system?
- A. Japan
  - B. Cuba
  - C. Australia
  - D. Canada

Use the chart to answer the next 2 questions.



10. What was the median family income for white families in 1965?

- A. \$4,900
- B. \$5,000
- C. \$7,500
- D. \$56,000

11. When was the greatest increase for non-white family incomes?

- A. 1940–1950
- B. 1950–1970
- C. 1960–1970
- D. 1970–1980

12. Introduction of the newest machinery into a factory could benefit both labor and management by

- A. decreasing the number of workers needed.
- B. increasing borrowing costs to pay for the machinery.
- C. increasing worker output per hour.
- D. decreasing worker output per hour.

**Use the article to answer the next 3 questions.**

**Overview of Plessy v. Ferguson**

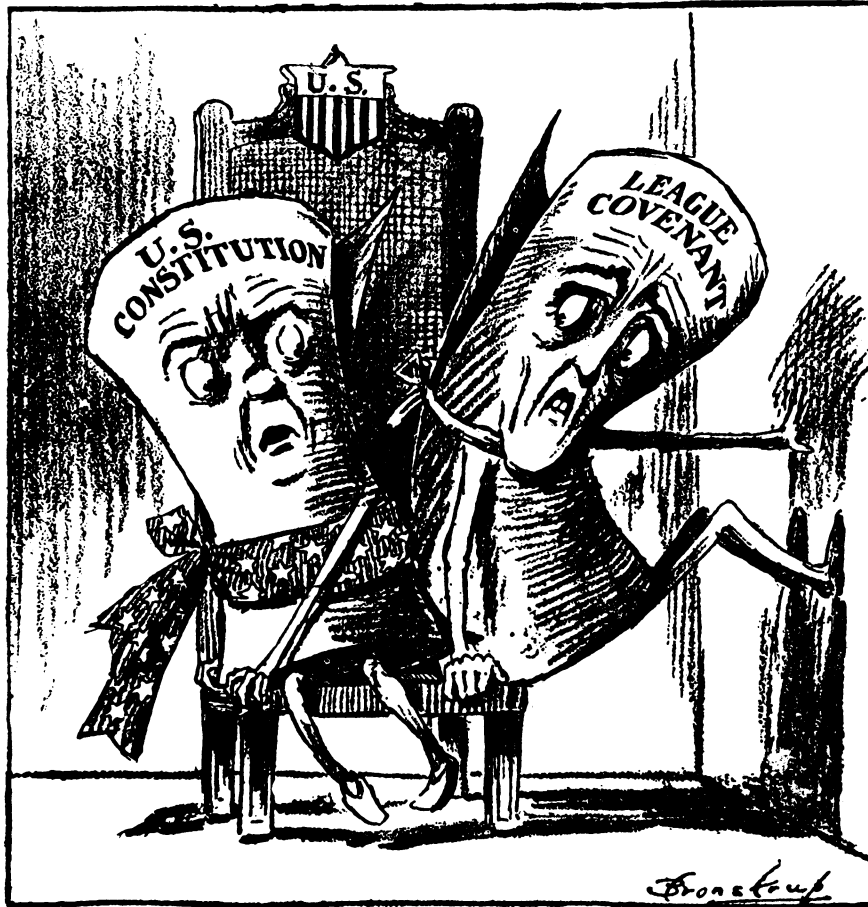
In Louisiana in 1895, Homer Plessy took a seat on a train car that was marked for whites only. However, according to Louisiana law, Mr. Plessy was classified as being of African American heritage. When he was asked to move to a train car for blacks, Mr. Plessy refused. He was arrested and removed from the train.

Mr. Plessy sued, claiming his rights under the Fourteenth Amendment had been violated. The case went to the Supreme Court of the United States where the Justices ruled against him.

13. What legal principle was established by this decision?
- A. Separate but equal
  - B. Informed consent
  - C. Trial by jury
  - D. Habeas corpus
14. Which Supreme Court case overturned Plessy v. Ferguson?
- A. Brown v. Board of Education
  - B. Marbury v. Madison
  - C. Miranda v. Arizona
  - D. Tinker v. Des Moines School District
15. What was the purpose of the Fourteenth Amendment?
- A. It granted the accused the right to a speedy trial.
  - B. It stated that citizens could not be denied the right to vote.
  - C. It stipulated that the accused must be indicted first.
  - D. It defined citizenship in the United States.
16. What links Three Mile Island and Chernobyl?
- A. Both are locations of nuclear arms reduction talks.
  - B. Both are sites of nuclear reactor accidents.
  - C. Both are sites of major naval shipyards.
  - D. Both have hosted world peace conferences.

Use this cartoon to answer the next 2 questions.

San Francisco Chronicle, 1919



Cartoon reprinted by permission of THE BETTMAN ARCHIVE.

17. Which situation is shown in the cartoon?

- A. The League of Nations is unwilling to cooperate with the U.S.
- B. The U.S. is trying to dominate the League of Nations.
- C. The League of Nations agreement is trying to replace the Constitution.
- D. The U.S. and the League of Nations are cooperating to maintain world peace.

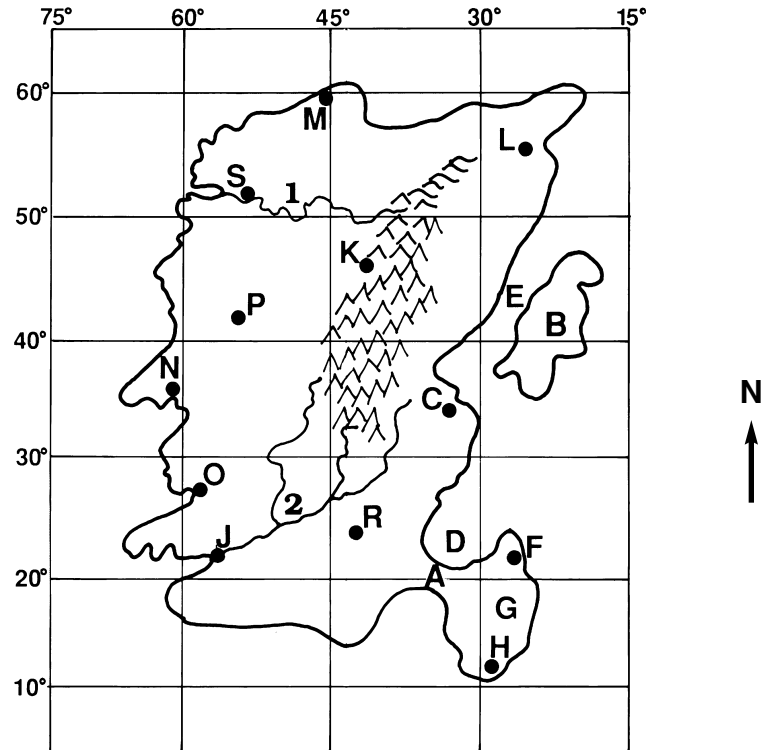
18. Which statement best expresses the main idea of this cartoon?

- A. President Wilson amended the League covenant in order to settle constitutional questions.
- B. Joining the League would deprive the U.S. of the freedom to set its own policies.
- C. The U.S. Senate was overwhelmingly in support of the League of Nations.
- D. The U.S. joined the League of Nations after several amendments were added to the covenant.

19. What was the main cause of gasoline shortages in the 1970s?
- A. Oil tanker accidents caused by NATO
  - B. An oil embargo led by OPEC
  - C. A sudden increase in United States gasoline usage
  - D. A sudden decrease in United States gasoline production
20. What theme in American politics is represented by the election of Andrew Jackson in 1828 and the birth of the Democratic Party?
- A. The need for educated, qualified politicians
  - B. The importance of strong state governments
  - C. The concern of the common people about slavery
  - D. The right of the common man to have a voice in government
21. What was the main effect of the journeys of Marco Polo and Christopher Columbus?
- A. Increased trade between regions of the world
  - B. Discovered many new medicines
  - C. Introduced democracy to new worlds
  - D. Lessened poverty in the world
22. Whose ideas are linked to the rise of communism during the 20<sup>th</sup> century?
- A. Karl Marx
  - B. Adolph Hitler
  - C. Friedrich Nietzsche
  - D. Mohandas K. Gandhi
23. Which baseball fact best illustrates the idea of “cultural diffusion”?
- A. The National League was formed in 1876. In 1900 the American League was formed.
  - B. The first professional baseball team, the Cincinnati Red Stockings, was formed in 1869.
  - C. Since World War II, baseball has become an extremely popular sport in Japan and much of Latin America.
  - D. Jackie Robinson was the first African American to play in the major leagues.
24. Culture is usually passed from one generation to another primarily through
- A. the government and the church.
  - B. the government and the school.
  - C. hereditary factors.
  - D. the family and the school.
25. Which of the following statements is probably true about interdependency?
- A. Most third world nations experience little interdependency.
  - B. Technological developments tend to decrease interdependency.
  - C. The world has become more interdependent over time.
  - D. Heightened interdependency has resulted in nations pursuing an isolationist foreign policy.
26. Which provides the best description of a cultural region?
- A. An area that has similar physical characteristics
  - B. An area that consists of countries with people of the same race
  - C. An area that consists of countries with common historical, language, and religious features
  - D. An area that shows the relationship between the arrangements of human activity and the natural environment



Refer to the map to answer the next 2 questions.



27. One of the cities on the island is a large, cosmopolitan city that is known for being a center for international trade and commerce. At which place is this city most likely to be located?

- A. C
- B. J
- C. L
- D. R

28. Which of these places is the most likely location of a ghost town that had once been a thriving mining town?

- A. H
- B. K
- C. O
- D. S

29. In a pluralistic society, varied customs and traditions

- A. are discouraged.
- B. are forbidden.
- C. develop and coexist.
- D. never change.

30. A national refusal to become involved in world affairs is known as a policy of

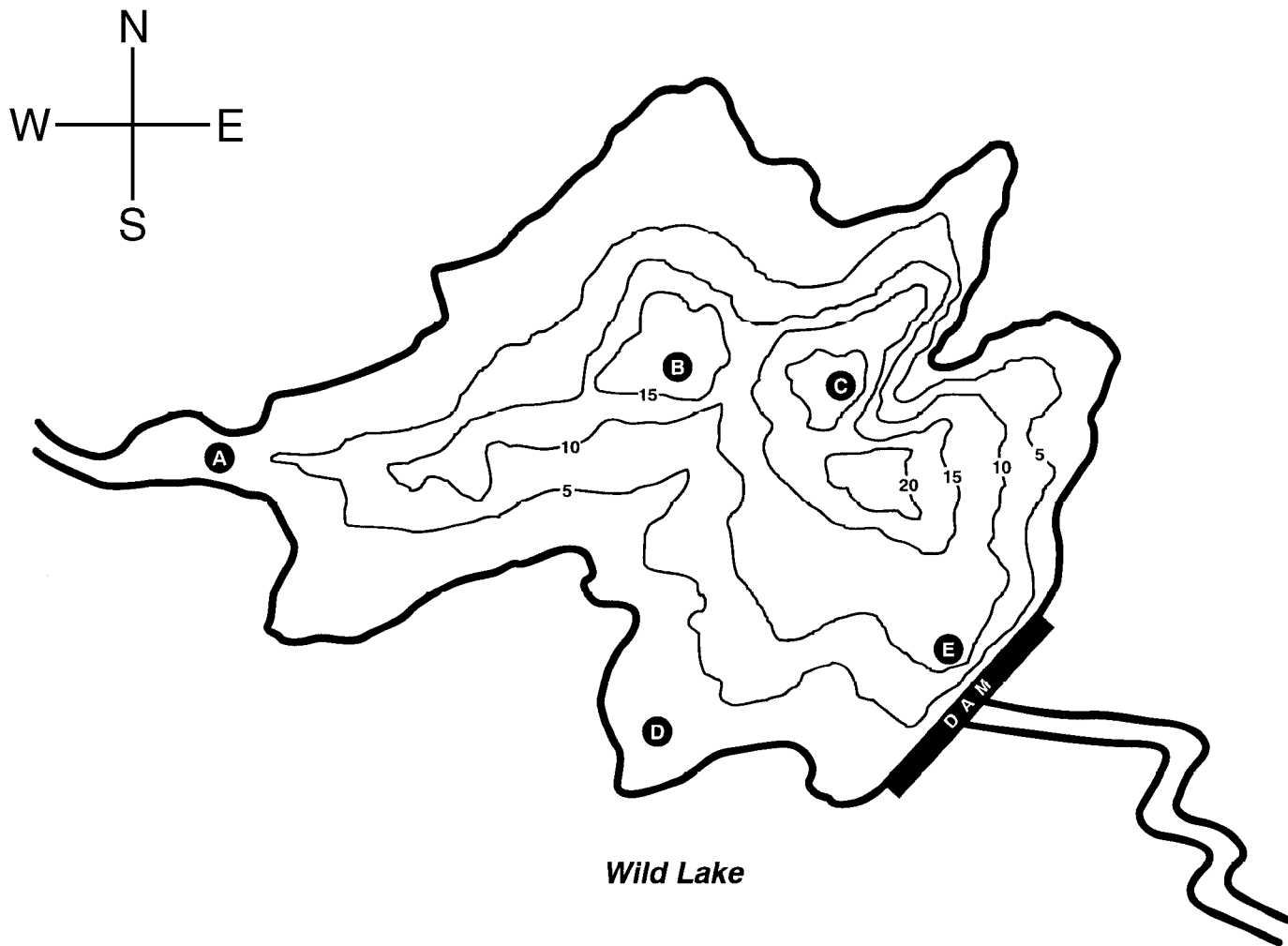
- A. detente.
- B. imperialism.
- C. isolationism.
- D. interventionism.

31. Which of the following is an example of a referendum?

- A. A group in favor of gun control petitions the state legislature to take action.
- B. The voters are asked to approve a tax increase to build a new school.
- C. Angered by a judge's decision, the voters demand that she be removed from office.
- D. Congress takes action against the president who has been charged with "high crimes and misdemeanors."

32. Which caused many Irish to leave their country and migrate to the United States in the 1840s?

- A. Inexpensive transportation
- B. Religious war
- C. Potato famine
- D. Civil War



33. In which direction is the water flowing at point A?

- A. Toward the North
- B. Toward the East
- C. Toward the South
- D. Toward the West

Use the excerpt to answer the next 2 questions.

You come to us and tell us that the great cities are in favor of the gold standard; we reply that the great cities rest upon our broad and fertile prairies. Burn down your cities and leave our farms, and your cities will spring up again as if by magic; but destroy our farms, and the grass will grow in the streets of every city in the country... You shall not press down upon the brow of labor this crown of thorns, you shall not crucify mankind upon a cross of gold.

34. How did the comparisons in the speech strengthen the speaker's argument for free silver?
- A. He destroyed the arguments of those opposed to him.
  - B. He presented arguments that could not be denied.
  - C. He used logic rather than emotion in his arguments.
  - D. He gave his arguments the feel of a religious crusade.
35. In the speech, which group would be figuratively "crucified"?
- A. Working people
  - B. Industrialists
  - C. Union leaders
  - D. Bankers



## Key to ISBE-Developed Social Science Sample Items

Item Number	Standard(s)	Correct Answer
1	14B	C
2	14B	B
3	14B	C
4	14A	C
5	14A	B
6	14F	C
7	15A, 15E	A
8	15D, 15E	C
9	15A	B
10	15E, 16A, 16B	C
11	15E, 16A, 16B	D
12	15C	C
13	14B, 16B	A
14	14B, 16A, 16B	A
15	14D, 14F, 16B	D
16	16B, 16E	B
17	16A, 16B	C
18	16A, 16B	B
19	15C, 16C	B
20	16D	D
21	16C, 16D	A
22	16B, 16C	A
23	18A, 18B	C
24	18A	D
25	17A, 18A, 18B	C
26	17A, 18A	C
27	17C	B
28	17C	B
29	18C	C
30	14E	C
31	14C	B
32	16D, 15B	C
33	17A	B
34	16C, 15E	D
35	16C, 15E	A

