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ABSTRACT

This document contains sample test items from the Florida College-Level Academic Skills Test (CLAST), an achievement test that measures communication and computation skills that students should have acquired on completing their sophomore year in college. The sample items in this document test the set of skills that were revised in September 1990 and began to be assessed on the October 1992 CLAST. CLAST skills are measured using four subtests: (1) essay; (2) English language skills; (3) reading; and (4) mathematics. Sample items are given for each area. Appendix A lists skills by broad skill categories within each subtest, and Appendix B contains skill statements and holistic scoring criteria for the essay subtest. Appendix C contains the answer key to the multiple choice items. The actual CLAST directions for the essay are presented here, and directions for the other subtests are abbreviated. (SLD)

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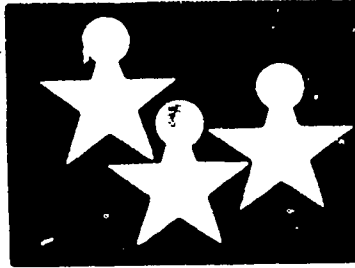
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CLAST

COLLEGE-  
LEVEL  
ACADEMIC  
SKILLS  
TEST



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# SAMPLE TEST ITEMS

For Skills Effective 10/92

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## CLAST SAMPLE TEST ITEMS

### Introduction

This document contains sample test items for the College-Level Academic Skills Test (CLAST). The CLAST is an achievement test which measures communication and computation skills that students should have acquired upon completing their sophomore year in college. An initial set of CLAST skill statements was developed in 1981 with the assistance of faculty members from community colleges, public universities, and independent institutions throughout the state of Florida. Periodically, this set of skills has been reviewed and revised by select faculty representatives. The sample items in this document test the set of skills revised in September 1990. These skills will be assessed on the CLAST beginning in October 1992.

The CLAST skills are measured using four subtests: essay, English language skills (ELS), reading, and mathematics. For the essay subtest, a student must compose an essay on one of two provided topics. The ELS, reading, and mathematics subtests are composed of multiple-choice questions to test the skills listed in Appendix A.

The skills listed in Appendix A are organized by broad skill categories within each subtest. When students receive their CLAST scores, they receive a score on each subtest and the percentage of items answered correctly for each of the broad skill categories. Some of the skills are tested on the CLAST using more than one test item. Since this sample test includes only one item for most skills, the sample test is not as long as the actual CLAST.

The actual CLAST directions for the essay appear in this sample test, whereas the general directions for the ELS, reading, and mathematics subtests are abbreviated. Directions for specific items within subtests are essentially the same as they would appear on the CLAST.

The skill statements and holistic scoring criteria for the essay subtest are provided in Appendix B. The answer key to the multiple-choice items is in Appendix C. This key identifies the correct answer for each item and the skill that is tested by each item.

## DIRECTIONS FOR ESSAY

You will have 60 minutes to plan, write, and proofread an essay on one of the topics below. READ THE TOPICS VERY CAREFULLY TO MAKE SURE YOU KNOW WHAT THEY ARE ASKING YOU TO DO.

TOPICS 1. A widespread idea or attitude in modern times that has had harmful effects

OR

2. A questionable practice in education today

Read the two topics again and select the one on which you wish to write your essay. In order for your essay to be scored, it must be on only one of these topics, and it must address the entire topic.

In your essay, you should introduce the subject and then either

- explain the subject you have chosen, or
- take a position about your subject and support it.

At least two evaluators will read your essay and assign it a score. They will pay special attention to whether you have

- addressed the topic as it is written,
- established a clear thesis or main idea,
- developed your thesis logically and in sufficient detail,
- used well-formed sentences and paragraphs,
- used language appropriately and effectively, and
- followed standard practices in spelling, punctuation, and grammar.

Take a few minutes to think about what you want to say before you start writing. Leave yourself a few minutes at the end of the period to proofread and make corrections.

You may cross out or add information as necessary. Although your handwriting will not affect your score, you should write as legibly as possible so the evaluators can easily read your essay.

You may use the following page to plan your essay. Your informal outline or plan will not be scored. Only what you write in your answer folder will be read. Do not begin until you are told to do so.

**GENERAL DIRECTIONS  
FOR THE  
ELS, READING, AND MATHEMATICS SUBTESTS**

The remainder of this booklet contains sample items for the multiple-choice ELS, reading, and mathematics subtests. There is only one correct answer for each item. Your score will be based on the number of correct answers. There is no penalty for guessing, so it is to your advantage to answer every question. Books, dictionaries, calculators, slide rules, rulers, and other aids are not permitted during the test. Scratch paper is not permitted, since you may write in your test booklet.

SAMPLE ITEMS: ENGLISH LANGUAGE SKILLS

DIRECTIONS: Choose the most effective word or phrase within the context suggested by the sentence.

1. Because of the enormity of the crimes attributed to him, Hitler became one of the most \_\_\_\_\_ figures of the 20th century.

- A. eminent
- B. infamous
- C. unfortunate

DIRECTIONS: Choose the underlined and lettered portion that is unnecessary within the context of the passage.

2. Conrad's novella Typhoon explores  
A  
themes that appear in some of his  
B  
other seafaring tales. Many readers  
C  
assume that because Conrad himself was  
a sailor, most scenes from the story  
D  
are genuinely authentic.  
E

- A. *Typhoon*
- B. some of his
- C. seafaring
- D. from the story
- E. genuinely

DIRECTIONS: Choose the sentence that expresses the thought most clearly and effectively and that has no error in structure.

3. A. A seemingly omnipresent medium, children as well as adults are affected by television.  
B. Children are affected by television, a seemingly omnipresent medium, as well as adults.  
C. Children as well as adults are affected by television, a seemingly omnipresent medium.

4. A. Physical education helps an individual to develop coordination, build muscular strength, and provides relief from stress.  
B. An individual needs to develop coordination, build muscular strength, and to relieve stress through physical education.  
C. Physical education helps an individual to develop coordination, build muscular strength, and relieve stress.

DIRECTIONS: For the underlined sentence, choose the option that expresses the meaning with the most fluency and the clearest logic within the context.

5.

A little-known hero of Irish legend is Grace O'Malley, a sea captain who lived from 1537-1601. She was a proud, small, and strikingly beautiful woman, and she commanded a fleet of Irish ships with enviable seamanship, uncommon bravery, and single-minded determination.

- A. She was a proud, small, and strikingly beautiful woman, and she commanded a fleet of Irish ships with enviable seamanship, uncommon bravery, and single-minded determination.
- B. A proud, small, and strikingly beautiful woman, she commanded a fleet of Irish ships with enviable seamanship, uncommon bravery, and single-minded determination.
- C. Since she was a proud, small, and strikingly beautiful woman, she commanded a fleet of Irish ships with enviable seamanship, uncommon bravery, and single-minded determination.
- D. Being a commander of a fleet of Irish ships with enviable seamanship, uncommon bravery, and single-minded determination, she was a proud, small, and strikingly beautiful woman.

DIRECTIONS: Choose the sentence that logically and correctly expresses the comparison.

6.

- A. She is happy as, if not happier than, Jane.
- B. She is as happy, if not happier, than Jane.
- C. She is as happy as, if not happier than, Jane.

7.

- A. The Sears Tower in Chicago is taller than any skyscraper in the Midwest.
- B. The Sears Tower in Chicago is taller than any other skyscraper in the Midwest.
- C. The Sears Tower in Chicago is tallest in the Midwest.

DIRECTIONS: Choose the correct option.

8.

Had she known that she was going to be delayed, she would have lain down for a nap.

- A. laid
- B. lay
- C. lied
- D. No change is necessary.



DIRECTIONS: The passage below contains several errors, some of which may appear in the underlined portions of the test items that follow. Read the passage. Then answer each test item by choosing the option that corrects an underlined error. No more than one underlined error will appear in each item. If no error exists, choose "No change is necessary."

Several environmental problems are becoming graver for the citizens of Florida and may leave the state with less resources in the 21st century. Garbage litters the streets, the beaches, and the waterways, spilling into the ocean. Native species, like the manatee and the Florida panther, were in danger of extinction. The Everglades, South Florida's most important source of water, is drying up, and offshore drilling by oil companies threaten to foul the coastlines. Because numerous species of both aquatic and land-dwelling organisms are endangered, they may be lost to the next generation of Floridians. The urgency of these problems, however, has not went unnoticed by some groups and private citizens. The Audubon Society, for example, has opposed destruction of The Everglades and wildlife by appealing to the governor and by spending its funds on public awareness programs. Also, Greenpeace has actively campaigned against offshore oil drilling. Thereby raising the public's awareness. Marjory Stoneman Douglas, now ninety-five years old and author of *The Everglades: River of Grass*, continues to carry on her campaign to preserve The Everglades and native wildlife. Efforts like these provide new hope of preserving the environment for all of us who are concerned.

Fortunately, environmental supporters may have found an unlikely hero, according to an article entitled "Last Gasp for The Everglades." Dexter Lehtinen, the U.S. Attorney in Miami, has filed suit against the State of

Florida for violating their own pollution laws. In times past, legal action against state governments has been taken by individuals but now environmentalists hope that federal agencies might force states to abide by their own laws.

9. Several environmental problems are  
A  
becoming graver for the citizens of  
B  
Florida and may leave the state with  
less natural resources in the 21st  
C  
century.
- A. environmentalist  
B. gravest  
C. fewer  
D. No change is necessary.
10. Garbage litters the streets, the  
A  
beaches, and the waterways, spilling  
into the ocean. Native species, like  
B  
the manatee and the Florida panther,  
were in danger of extinction.  
C
- A. litter  
B. species  
C. are  
D. No change is necessary.
11. The Everglades, South Florida's most important source of water, is drying up, and offshore drilling by oil companies threaten to foul the coastlines.
- A. threatens to foul  
B. are threatening to foul  
C. threaten and foul  
D. No change is necessary.

12. The urgency of these problems, however, has not went unnoticed by some groups and private citizens.
- A. has not gone  
B. have not gone  
C. have not went  
D. No change is necessary.
13. The Audubon Society, for example, has opposed destruction of The Everglades and wildlife by appealing to the governor and by spending its funds on public awareness programs.
- A. Audubon society  
B. the everglades  
C. Public Awareness  
D. No change is necessary.
14. The Audubon Society, for example, has opposed destruction of The Everglades and wildlife by appealing to the governor and by spending its funds on public awareness programs.
- A. opposed  
B. distruction  
C. appealing  
D. No change is necessary.
15. Also, Greenpeace has actively campaigned against offshore oil drilling. Thereby raising the public's awareness.
- A. drilling thereby  
B. drilling; thereby,  
C. drilling, thereby  
D. No change is necessary.

16. Efforts like these provide new hope of preserving the environment for all of us who are concerned.
- A. they  
B. we  
C. whom  
D. No change is necessary.
17. Dexter Lehtinen, the U.S. Attorney in Miami, has filed suit against the State of Florida for violating their own pollution laws.
- A. Miami has  
B. its  
C. polution  
D. No change is necessary.
18. In times past, legal action against state governments has been taken by individuals but now environmentalists hope that federal agencies might force states to abide by their own laws.
- A. individuals, now  
B. individuals and now  
C. individuals, but now  
D. No change is necessary.

DIRECTIONS: Choose the correct option.

19. Certain standards of conduct may be altered with the passing of a single generation, however many cultural norms remain unchanged over a much greater period of time.
- A. generation, however;  
B. generation. However;  
C. generation; however,  
D. No change is necessary.

SAMPLE ITEMS: READING

DIRECTIONS: Read the passage. Then choose the best answer for each item.

Privileges of senators and representatives include some immunity from arrest as well as extraordinary freedom of speech. The constitutional provision that national legislators are immune from arrest except for treason, felony, and breach of peace has been interpreted by the courts to prohibit only arrests in civil suits. In criminal cases, members are as liable to arrest as other citizens. The same clause declares that "for any speech or debate in either house, they shall not be questioned in any other place." This means that senators and representatives may speak and act freely without fear of criminal prosecutions or civil suits.

The House and Senate have full power to determine their own rules, to discipline for excesses, and, in extreme cases, to expel members. For mild offenses and indiscretions, a member is called to order. Occasionally a house will censure a member; a leading example was the censure of Senator Joseph McCarthy in 1954.

Granting a large measure of privilege to legislators is desirable, but immunity may be abused. From the floor of the House or Senate or in a committee, persons can be defamed without practical means of fighting back. In the long run, perhaps rules of fair conduct established by congressional committees can correct some of the worst abuses. Real progress has been achieved under the House committee ground rules adopted in 1955. Still, acquisition of self-restraint by all congressional members remains highly unlikely.

1. On line 6, the word immune means

- A. exempt.
- B. released.
- C. subject (to).
- D. disengaged.

2. The main idea expressed in this passage is that

- A. granting privileges to legislators is desirable, but there is a need to ensure that immunity from arrest is not abused.
- B. the House and Senate have full power to determine their own rules and, in extreme cases, to expel members.
- C. senators and representatives may speak and act freely without fear of criminal prosecution or civil suits.
- D. rules of fair conduct by congressional committees can correct abuses of privileges.

3. The sentence beginning on line 39 ("Still, acquisition of...") is a statement of

- A. fact.
- B. opinion.

4. The author uses the example of Senator Joseph McCarthy (lines 25-27) to illustrate which point?

- A. In criminal cases, legislators are as liable to arrest as other citizens.
- B. In some cases, a house may decide to express disapproval of a member.
- C. The House and Senate have full power to expel a member.
- D. Legislators may speak and act freely in either house without fear of prosecution or civil suits.

DIRECTIONS: Read the passage. Then choose the best answer for each item.

Because Greek and Latin are no longer in general use, English is by default the richest and most complex language spoken and written today. It is also the most difficult. Its difficulty stems not from inflectional word endings but from the large number, infinite variety, and incredible precision of English words. English is an analytical language, its literate users assuming--linguistic philosophy notwithstanding--that words used correctly can describe, define, differentiate, analyze, demonstrate, and clarify any knowable or known phenomenon. Therefore, the English language not only preserves words from antiquity but also chronicles contemporary progress and change; it prizes synonyms, tolerates homonyms, and sacrifices simplicity for precision. For instance, whereas French uses primarily one word to express "at an accelerated pace" (*vite*: quickly), English commonly uses any of several: *quickly, rapidly, fast, swiftly, etc.*

Inevitably, because English preserves such a bewildering variety of closely related words, many English words confuse both foreign and native speakers. In addition to its natural complexity, English also confuses inexperienced users for reasons directly connected to the decline of American education, the emergence of an impassive mass culture that much prefers television to books, the mass assumption that computer technology has rendered reading and writing obsolete, and the tradition of anti-intellectualism that shaped early American education and still stultifies learning and education today. New knowledge enables one to share more fully in humankind's grandest heritage: its memory of itself, its language.

5. The author's primary purpose in writing this passage is to
- A. show how the complexity of the English language has affected the quality of American education.
  - B. inform the reader about the ways in which language, and English in particular, affects perception.
  - C. describe the complexity of English and explain why it may be difficult for some of its users.
  - D. demonstrate the way in which the English language sacrifices simplicity for precision.
6. What is the relationship between the sentence beginning on line 1 ("Because Greek and Latin...") and the sentence beginning on line 4 ("It is also...")?
- A. cause and effect
  - B. comparison and contrast
  - C. clarification
  - D. addition
7. The passage suggests that
- A. societal influences can affect the perceived difficulty of English.
  - B. anti-intellectualism in American education was more prevalent in past decades than in recent years.
  - C. the English language systematically discards old, overused terms in favor of newer ones.
  - D. French parallels English in terms of complexity.

DIRECTIONS: Refer to the list of fallacies to answer the next item.

List of Fallacies

Argument to the people (*argumentum ad populum*)--an appeal to the emotions of the audience rather than an attempt to deal with the issue(s)

Argument to the person (*argumentum ad hominem*)--an attack on a person's character in order to discredit that person's position, rather than an attack on the position itself

Bandwagon appeal--promotion of a position by asserting its popularity (i.e., "everybody feels this way")

Begging the question--asserting as truth what is yet to be proven by the argument

Circular logic--argumentation that merely restates what is stated or implied in the first part of the argument

Either/or--argumentation that limits choices on an issue to two opposing positions

Faulty analogy--an invalid comparison used to support a position

Faulty cause and effect (*post hoc, ergo propter hoc*; "after this, therefore because of this")--invalid assumption that one event is caused by or causes another

Hasty generalization--a conclusion based on insufficient or unrepresentative evidence

Non sequitur--an inference or a conclusion that is not necessarily a result of the facts

Red herring--the introduction of an irrelevant point to divert attention from the main issue

8.

Which fallacy is used in the statement, "There aren't enough parking spaces on campus because there are too many cars"?

- A. red herring
- B. faulty analogy
- C. circular logic
- D. hasty generalization

DIRECTIONS: The following passage has several words deleted. For each blank, choose the word or phrase that best completes the passage.

North and South America present some remarkable physical similarities; (9), large differences are clear as well. First, South America was colonized by two countries, Spain and Portugal, which were ruled by kings who had absolute power. Second, the motives for colonization were altogether different. The pioneers who came to North America came to stay; they had left Europe behind them for good; their aim was to carve out new lives in the wilderness, free of Europe, under a new form of government. (10), the early Latins came to locate new resources and return home again, (11) many stayed. Third, there were elements of unity in North America from the beginning that did not exist in South America.

9.

- A. and
- B. thus
- C. however
- D. moreover

10.

- A. In addition
- B. On the other hand
- C. Nevertheless
- D. Similarly

11.

- A. although
- B. since
- C. for
- D. while

DIRECTIONS: Read the passage. Then choose the best answer for each item.

- Scientists, and rational people in general, have long scoffed at the superstition that a "dowser" can take a willow twig, split it from the larger end, hold it in two hands, walk across the land, and feel it pull downward when it is above a source of water. Yet some people remain convinced that certain individuals are "born dowsers," and in some rural communities almost every family has a tale to tell about finding water with a divining rod. This inexplicable custom prevails even as the 20th century wanes.
- 15 In his book *Supernature* (Hodder & Stoughton, Ltd., London, 1973), Lyall Watson declares: "Every major water and pipeline company in the United States has a dowser on its payroll. The Canadian Ministry of Agriculture employs a permanent dowser. UNESCO has engaged a Dutch dowser and geologist to pursue official investigations for them."
- 25 There are even articles and books telling how so-called dowsers have been able to locate things other than water: booby traps, mines, and unexploded shells in Vietnam, for example.
- 30 That such archaic beliefs and practices continue to persist in Western culture is mystifying, especially when one considers the lack of scientific evidence to corroborate the phenomenon of dowsing. Surprisingly, a recent full-scale investigation of dowsing has actually been funded at two international universities, according to Watson. But whether this research will yield findings that even remotely justify the spending is a question that perhaps only a dowser could answer

12. The tone of this passage is best described as
- A. amused.
  - B. bitter.
  - C. skeptical.
  - D. detached.
13. In this passage, the author expresses bias against
- A. scientific research.
  - B. dowsing.
  - C. UNESCO.
  - D. funding for universities.
14. The organizational pattern of the second paragraph (lines 15-24) primarily employs
- A. cause and effect.
  - B. classification.
  - C. chronological order.
  - D. examples.

DIRECTIONS: Choose the word or phrase that best identifies the relationship between the parts of the sentence below.

15. I like summer, yet the heat and humidity can be unbearable.
- A. cause and effect
  - B. contrast
  - C. example
  - D. spatial order

SAMPLE ITEMS: MATHEMATICS

1.  $-\frac{2}{3} - (-1) =$

A.  $-\frac{5}{3}$

B.  $-1$

C.  $-\frac{1}{3}$

D.  $\frac{1}{3}$

2.  $(-6) \times 2\frac{1}{3} =$

A.  $-21$

B.  $-14$

C.  $-12\frac{1}{3}$

D.  $12\frac{1}{3}$

3.  $-15.23 - 2.032 =$

A.  $17.262$

B.  $-13.198$

C.  $-17.055$

D.  $-17.262$

4.  $(-.06) \div 1.2 =$

A.  $-.5$

B.  $-.2$

C.  $-.05$

D.  $.5$

5. If 25 is decreased to 20, what is the percent decrease?

A. 5%

B. 8%

C. 20%

D. 25%

6. What percent of 90 is 36?

A. .40%

B. 25%

C. 40%

D. 250%

7.  $2^2 + 5^2 =$

A.  $(2 + 5)^2$

B.  $(2 + 5)^4$

C.  $(2)(2) + (5)(2)$

D.  $(2)(2) + (5)(5)$

8. Select the place value associated with the underlined digit.

6.0281

A.  $\frac{1}{10^8}$

B.  $\frac{1}{10^3}$

C.  $10^8$

D.  $10^3$



9.  $\frac{13}{25} =$

- A. 0.52
- B. 0.052
- C. 5.2%
- D. 0.52%

10. Identify the symbol that should be placed in the box to form a true statement.

$3.\overline{24} \quad \square \quad 3.\overline{24}$

- A. =
- B. <
- C. >

11. Two hundred students took an achievement test. All of the students scored less than 90 but more than 56. Which of the following values is a reasonable estimate of the average score of the students?

- A. 98
- B. 68
- C. 56
- D. 42

12. Identify the missing term in the following geometric progression:

$4, -2, 1, -\frac{1}{2}, \frac{1}{4}, \text{---}$

- A.  $-\frac{1}{16}$
- B.  $-\frac{1}{8}$
- C.  $\frac{1}{8}$
- D.  $\frac{1}{2}$

13. A bookstore orders 25 books for a class of 22 students. Each book, which costs the bookstore \$15, is to be sold for \$20. The bookstore must pay a \$2 service charge for each unsold book returned. If the bookstore returns 3 books, how much profit will the bookstore make?

- A. \$104
- B. \$108
- C. \$109
- D. \$110

14. Ana learned that by insulating her house she would use only 65% as much fuel. Last year, with no insulation, she used 140 gallons of fuel. How much fuel can Ana expect to save in a year by insulating her house?

- A. 40 gallons
- B. 49 gallons
- C. 75 gallons
- D. 91 gallons

15. How many whole numbers leave a remainder of 2 when divided into 56, and a remainder of 1 when divided into 28?

- A. 0
- B. 2
- C. 3
- D. 4

16. Round 34.48 centimeters to the nearest centimeter.

- A. 34 cm
- B. 35 cm
- C. 34.5 cm
- D. 345 cm



17.

What is the distance around a circular flower bed that has a radius of 7 feet?

- A. 98 feet
- B.  $49\pi$  feet
- C.  $36\pi$  feet
- D.  $14\pi$  feet

18.

What is the surface area of a rectangular solid that is 10 inches long, 8 inches wide, and 6 inches high?

- A. 480 cubic inches
- B. 376 square inches
- C. 376 inches
- D. 276 square inches

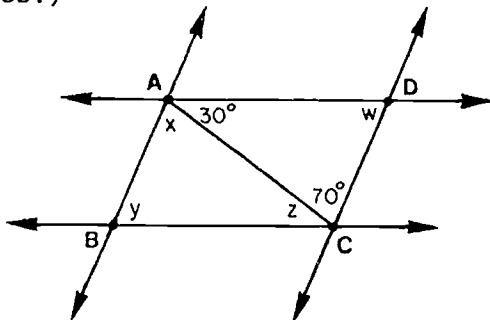
19.

What is the volume of a rectangular solid that is 10 inches long, 8 inches wide, and 6 inches high?

- A. 480 cubic inches
- B. 420 cubic inches
- C. 480 square inches
- D. 376 square inches

20.

Given that  $\overline{AB} \parallel \overline{DC}$  and  $\overline{AD} \parallel \overline{BC}$ , which of the following statements is true for the figure shown? (Lowercase letters represent the measures of angles.)



- A.  $x = w$
- B.  $y = 80^\circ$
- C.  $x = 30^\circ$
- D.  $w = 70^\circ$

21.

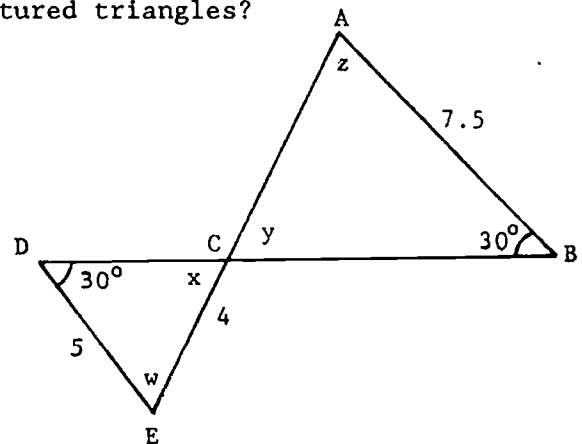
Select the geometric figure that may possess all of the following characteristics:

- i. The shape is quadrilateral.
- ii. All opposite sides are parallel.
- iii. Diagonals have different lengths.

- A. rectangle
- B. square
- C. trapezoid
- D. rhombus

22.

Which statement is true for the pictured triangles?



- A.  $z \neq w$
- B.  $x = 30^\circ$
- C.  $AC = 6$
- D.  $\frac{CE}{CA} = \frac{CB}{CD}$

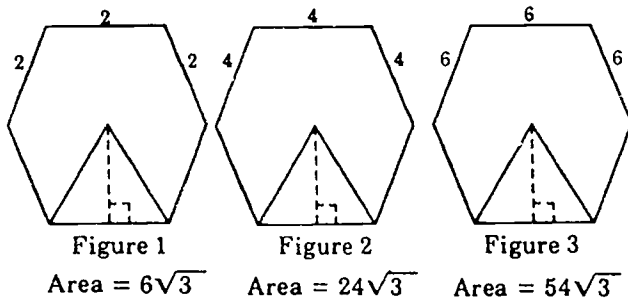
23.

Which of the following units of measurement would not be used to report the amount of water needed to fill a swimming pool?

- A. cubic feet
- B. liters
- C. gallons
- D. meters

24.

Use the information given with the regular hexagons to answer the question below.

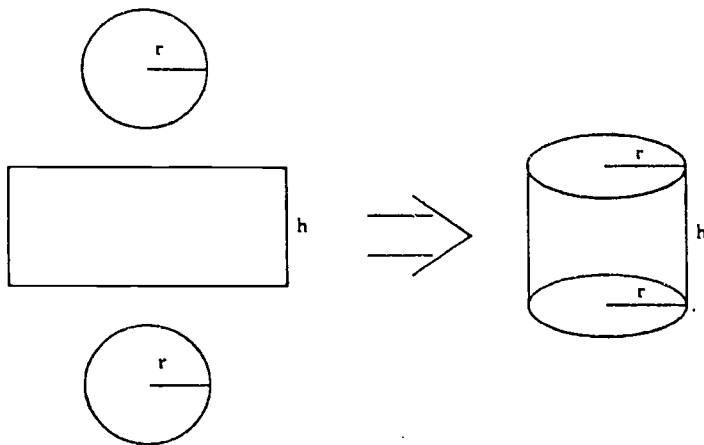


What is the area of a regular hexagon with a side equal to 8?

- A.  $36\sqrt{3}$
- B.  $48\sqrt{3}$
- C.  $72\sqrt{3}$
- D.  $96\sqrt{3}$

25.

Study the figure showing the circles which form the top and bottom of a right circular cylinder and the rectangle which bends around to form the cylinder's "sides." Then select the formula for calculating the total surface area (SA) of a right circular cylinder.



- A.  $SA = \pi r^2 h$
- B.  $SA = h(2\pi r) + \pi r^2$
- C.  $SA = 2\pi r^2 + h(2\pi r)$
- D.  $SA = 2(2\pi r) + h(2\pi r)$

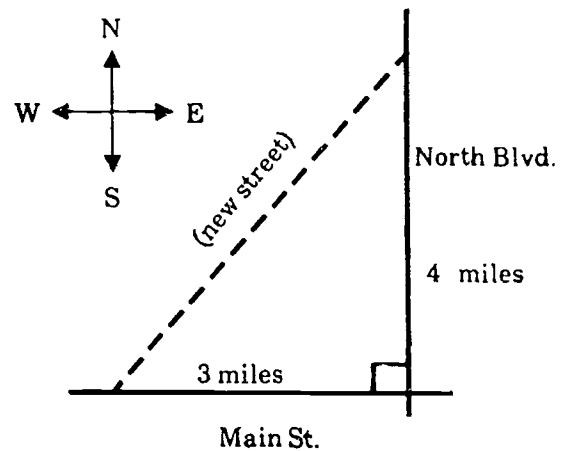
26.

The outside dimensions of a picture frame are 2 feet by 30 inches. If its inside dimensions are  $1\frac{3}{4}$  feet by 27 inches, what is the area of the frame?

- A. 12 square feet
- B. 12.75 square feet
- C. 153 square inches
- D. 162 square inches

27.

The city commission wants to construct a new street connecting Main Street and North Boulevard as shown in the diagram below. Construction cost has been estimated at \$100 per linear foot. What is the estimated cost for constructing the new street?



- A. \$1,848,000
- B. \$2,640,000
- C. \$3,696,000
- D. \$13,200,000

28.

$$7\pi + 10\pi - 5 =$$

- A.  $17\pi^2 - 5$
- B.  $17\pi - 5$
- C.  $12 + 2\pi$
- D.  $12\pi$

29.

$$\sqrt{3} \times \sqrt{6} =$$

- A.  $9 \times 36$
- B.  $9\sqrt{2}$
- C.  $3\sqrt{2}$
- D. 3

30.

$$8t - 3t(2) + 14t^2 + 7(2) =$$

- A.  $4t^2 + 10t$
- B.  $4t^2 + 2t$
- C.  $t^2 + 10t$
- D.  $t^2 + 2t$

31.

$$.00492 \div 2,460,000 =$$

- A.  $2.00 \times 10^{-9}$
- B.  $2.00 \times 10^{-2}$
- C.  $2.00 \times 10^3$
- D.  $2.00 \times 10^9$

32.

If  $3y + 1 = y + 9$ , then

- A.  $y = 2$
- B.  $y = \frac{5}{2}$
- C.  $y = 4$
- D.  $y = 5$

33.

If  $3x + 1 < 2x + 4$ , then

- A.  $x > 1$
- B.  $x < 1$
- C.  $x < 3$
- D.  $x < 5$

34.

If  $2(x - 5) - 3(x + 1) \geq 0$ , then

- A.  $13 \leq x$
- B.  $-13 \geq x$
- C.  $-13 \leq x$
- D.  $13 \geq x$

35.

Given that  $a = (b + 2)^2$ ; if  $b = 4$ , then  $a =$

- A. 6
- B. 16
- C. 20
- D. 36

36.

Find  $f(-3)$ , given:

$$f(x) = 2x^2 - 3x - 1$$

- A. -16
- B. 8
- C. 20
- D. 26

37.

Which is a linear factor of the following expression?

$$3x^2 - x - 4$$

- A.  $x - 2$
- B.  $3x + 2$
- C.  $3x - 4$
- D.  $x + 2$

38.

Find the correct solutions to this equation:

$$x^2 - 2x - 2 = 0$$

- A. - 2 and + 1
- B.  $1 - \sqrt{2}$  and  $1 + \sqrt{3}$
- C.  $1 - \sqrt{3}$  and  $1 + \sqrt{3}$
- D.  $1 + \sqrt{2}$  and  $1 - \sqrt{3}$

39.

Choose the correct solution set for the system of linear equations.

$$\begin{aligned} 5x - 3y &= 25 \\ x + 2y &= -8 \end{aligned}$$

- A.  $\{(2, -5)\}$
- B.  $\{(-8, 0)\}$
- C.  $\{(2, 5)\}$
- D. the empty set

40.

Choose the expression equivalent to the following:

$$8y + 2x$$

- A.  $10xy$
- B.  $y(8 + 2x)$
- C.  $4y + x$
- D.  $2(4y + x)$

41.

For which of the statements below is  $x = -3$  a solution?

- i.  $|x + 3| = 0$
- ii.  $x^2 + 5x + 6 \geq 0$
- iii.  $(x + 2)(x + 3) = 0$

- A. i, ii, and iii
- B. i and ii only
- C. i and iii only
- D. ii and iii only

42.

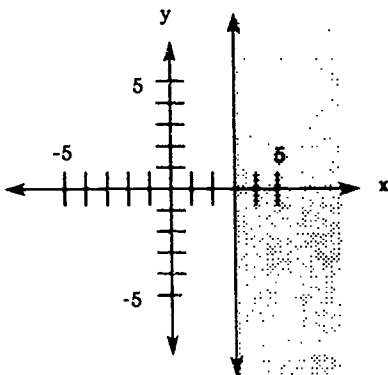
The area of a set of rectangular pictures is held constant while the length and width may change. Let  $\ell$  represent the length of the picture. If the length is 12 when the width is 3, select the correct statement of the condition when the width is 4.

- A.  $\frac{\ell}{4} = \frac{3}{12}$
- B.  $\frac{12}{3} = \frac{\ell}{4}$
- C.  $\frac{\ell}{12} = \frac{4}{3}$
- D.  $\frac{\ell}{12} = \frac{3}{4}$

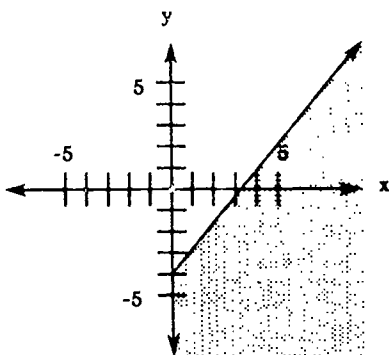
43.

Which shaded region identifies the portion of the plane in which  $x \geq 3$  and  $y \leq 0$ ?

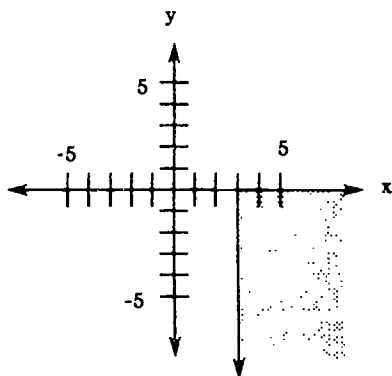
A.



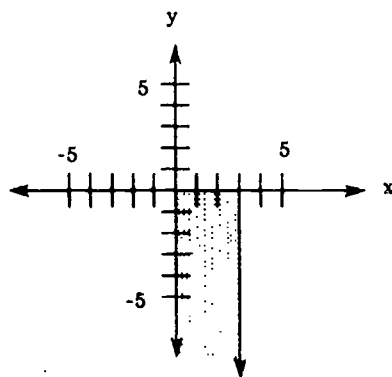
B.



C.



D.



44.

Choose the inequality equivalent to the following:

$$-3x > 12$$

- A.  $x < 4$
- B.  $x < -4$
- C.  $x > -4$
- D.  $x > 4$

45.

Boyle's Law states that when the temperature of a dry gas is kept constant, the volume varies inversely with the pressure. If the volume is 12 cubic inches when the pressure is 36 pounds, what is the volume when the pressure is 24 pounds?

- A. 8 cubic inches
- B. 18 cubic inches
- C. 72 cubic inches
- D. 432 cubic inches

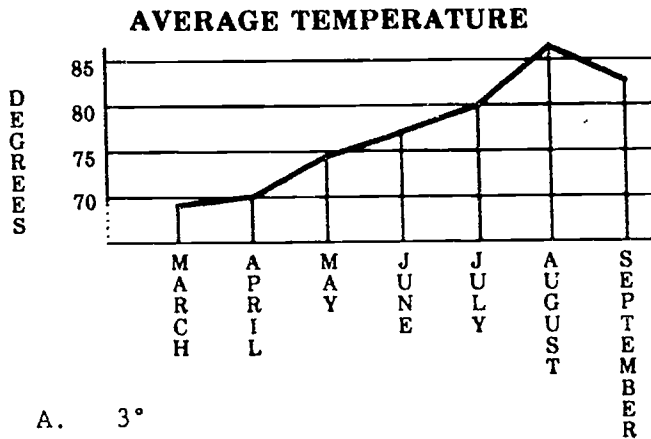
46.

The square of a number, decreased by 4 times the number, is 21 more than the number. Which equation should be used to find  $x$ , the number?

- A.  $x^2 - 5x = 21$
- B.  $(x - 4)^2 = x + 21$
- C.  $x^2 - 4x^2 = x + 21$
- D.  $x^2 - 4x^2 + 21 = x$

47.

The graph below represents the monthly average temperature for 7 months of the year. How much higher is the average temperature in July than it is in April?



- A. 3°
- B. 5°
- C. 10°
- D. 15°

48.

What is the mean of the data in the following sample?

10, 6, 11, 6, 12, 1, 11, 9, 6

- A. 6
- B. 7
- C. 8
- D. 9

49.

Four instructors are available to teach four different classes. If each instructor is qualified to teach all four classes, and each instructor is to teach exactly one class, then how many ways can the instructors be assigned to the classes?

- A. 4
- B. 10
- C. 16
- D. 24

50.

In a mathematics class, half the students scored 85 on an achievement test. Most of the remaining students scored 75, except for a few students who scored 20. Which of the following statements is true about the distribution of scores?

- A. The mode and the mean are the same.
- B. The mean and the median are the same.
- C. The mean is less than the median.
- D. The mean is greater than the median.

51.

A newspaper wants to find out which comic strips are popular with its readers. The newspaper decides to conduct a survey of a sample of its readers. Which procedure would be most appropriate for obtaining a statistically unbiased sample of the newspaper's readers?

- A. having readers voluntarily mail in their preferences
- B. surveying the first hundred subscribers from an alphabetical listing of subscribers
- C. surveying a random sample of readers from a list of all subscribers
- D. surveying a random sample of people from the telephone directory

52.

Two common sources of caffeine for U.S. adults are coffee and tea. Forty percent of U.S. adults drink coffee but not tea, while 25% drink both. What is the probability that a randomly selected adult does not drink coffee?

- A. .15
- B. .35
- C. .65
- D. .85

53.

The size of a firm's sales force and its yearly sales revenue are given below for ten consecutive years.

Year	Number of Salespersons	Sales (In Hundred Thousand Dollars)
1978	15	1.35
1979	18	1.63
1980	24	2.33
1981	22	2.39
1982	25	2.67
1983	29	2.91
1984	30	3.40
1985	32	3.20
1986	35	3.67
1987	38	4.20

Which statement best describes the relationship between sales force size and yearly sales?

- A. Increasing the number of salespersons caused increased sales.
- B. Increased sales caused the firm to expand its sales force.
- C. There appears to be a positive association between the size of the sales force and yearly sales.
- D. The size of the sales force does not provide information needed to predict yearly sales revenue.

54.

The table below shows the distribution of families by income in a city.

Income Level	Percent Of Families
\$ 0 - 9,999	3
10,000 - 14,999	8
15,000 - 19,999	23
20,000 - 24,999	32
25,000 - 34,999	12
35,000 - 49,999	9
50,000 - 79,999	8
80,000 - 119,999	4
120,000 and over	1

What percentage of the families have an income of at least \$35,000?

- A. 22
- B. 34
- C. 35
- D. 78

55.

The chart below classifies university students according to their gender and their year in college.

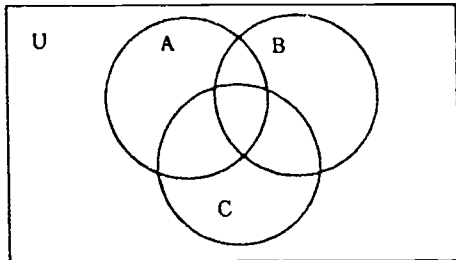
	Freshman	Sophomore	Junior	Senior
Male	12%	10%	25%	13%
Female	8%	15%	10%	7%

Find the probability that a randomly selected university student is male.

- A. .12
- B. .20
- C. .50
- D. .60

56.

Sets A, B, C, and U are related as shown in the diagram.



Which of the following statements is true, assuming that none of the eight regions is empty?

- A. Any element that is a member of set A is also a member of set B.
- B. No element is a member of all three sets A, B, and C.
- C. Any element that is a member of set U is also a member of set C.
- D. None of the above statements is true.

57.

Select the statement that is the negation of this statement: "It is raining and it is cold."

- A. If it is raining, then it is cold.
- B. It is not raining and it is not cold.
- C. It is not raining and it is cold.
- D. It is not raining or it is not cold.

58.

Select the statement below that is logically equivalent to "If Jones is in Los Angeles, then he is in California."

- A. If Jones is not in California, then he is not in Los Angeles.
- B. Jones is in Los Angeles, or he is in California.
- C. If Jones is in California, then he is in Los Angeles.
- D. If Jones is not in Los Angeles, then he is not in California.

59.

Read the qualifications for obtaining a \$40,000 loan. Then read the information on each applicant to determine which one, if any, qualifies for the loan.

To qualify for a loan of \$40,000, an applicant must have a gross income of at least \$30,000 if single (\$50,000 combined income if married) and assets of at least \$10,000.

Mr. Green, married with two children, makes \$35,000 on his job. His wife does not work.

Mrs. Diaz and her husband have assets of \$50,000. One makes \$22,000; the other makes \$19,000.

Mr. Weissmann is a bachelor and works at two jobs. He makes \$28,000 on one job and \$5,000 on the other; he also has assets valued at \$7,000.

- A. Mr. Green
- B. Mrs. Diaz
- C. Mr. Weissmann
- D. No one is eligible for the loan.



60.

All of the following arguments have true conclusions, but one of the arguments is not valid. Select the argument that is not valid.

- A. All birds have feathers and all penguins are birds; therefore, all penguins have feathers.
- B. All birds have legs and all penguins are birds; therefore, all penguins have legs.
- C. All fleas have six legs and all insects have six legs; therefore, all fleas are insects.
- D. Every borough of New York City is in New York State. The Bronx is a borough of New York City; therefore, the Bronx is in New York State.

61.

Select the conclusion that will make the following argument valid.

If all people obey the law, then no jails are needed. Some jails are needed.

- A. Some people obey the law.
- B. If there are no jails, then all people obey the law.
- C. All people obey the law.
- D. Some people do not obey the law.

62.

Select the rule of logical equivalence that directly (in one step) transforms statement *i* into statement *ii*.

- i. Not all of the boys and girls are left-handed.
  - ii. Some boy or girl is not left-handed.
- A. "If *p*, then *q*" is equivalent to "If not *q*, then not *p*."
  - B. "Not (not *p*)" is equivalent to *p*.
  - C. "Not all are *p*" is equivalent to "Some are not *p*."
  - D. "All are not *p*" is equivalent to "None are *p*."

63.

Study the information given below. If a logical conclusion is given, select that conclusion. If none of the conclusions given is warranted, select the option expressing this condition.

All beachcombers are swimmers. All swimmers wear swimsuits. Sally is wearing a swimsuit.

- A. Sally can swim.
- B. Sally cannot swim.
- C. Sally is a beachcomber.
- D. None of the above is warranted.

END OF SAMPLE ITEMS

## APPENDIX A

### College-Level Academic Skills Test Objective Skill Statements and Codes Effective October 1992

#### ENGLISH LANGUAGE SKILLS

##### Word Choice Skills:

- B1a - Uses words that convey the denotative and connotative meanings required by context
- B1c - Avoids wordiness

##### Sentence Structure Skills:

- B2a - Places modifiers correctly
- B2b - Coordinates and subordinates sentence elements according to their relative importance
- B2c - Uses parallel expressions for parallel ideas
- B2d - Avoids fragments, comma splices, and fused sentences

##### Grammar, Spelling, Capitalization, and Punctuation Skills:

- B4a - Uses standard verb forms
- B4b1 - Maintains agreement between subject and verb
- B4b2 - Maintains agreement between pronoun and antecedent
- B4c - Uses proper case forms
- B4e - Uses adjectives and adverbs correctly
- B4f - Avoids inappropriate shifts in tense
- B4g - Makes logical comparisons
- B5a - Uses standard practice for spelling
- B5b - Uses standard practice for punctuation
- B5c - Uses standard practice for capitalization

#### READING SKILLS

##### Literal Comprehension Skills:

- A1 - Recognizes main ideas in a given passage
- A2 - Identifies supporting details
- A3 - Determines meaning of words on the basis of context

##### Critical Comprehension Skills:

- B1 - Recognizes the author's purpose
- B2 - Identifies the author's overall organizational pattern
- B3 - Distinguishes between statement of fact and statement of opinion
- B4 - Detects bias
- B5 - Recognizes author's tone
- B6 - Recognizes explicit and implicit relationships within sentences
- B7 - Recognizes explicit and implicit relationships between sentences
- B8 - Recognizes valid arguments
- B9 - Draws logical inferences and conclusions

## MATHEMATICS SKILLS

### Arithmetic Skills:

- IA1a - Adds and subtracts rational numbers
- IA1b - Multiplies and divides rational numbers
- IA2a - Adds and subtracts rational numbers in decimal form
- IA2b - Multiplies and divides rational numbers in decimal form
- IA3 - Calculates percent increase and percent decrease
- IA4 - Solves the sentence  $a\%$  of  $b$  is  $c$ , where values for two of the variables are given
- IIA1 - Recognizes the meaning of exponents
- IIA2 - Recognizes the role of the base number in determining place value in the base-ten numeration system
- IIA3 - Identifies equivalent forms of positive rational numbers involving decimals, percents, and fractions
- IIA4 - Determines the order relation between real numbers
- IIA5 - Identifies a reasonable estimate of a sum, average, or product of numbers
- IIIA1 - Infers relations between numbers in general by examining particular number pairs
- IVA1 - Solves real-world problems which do not require the use of variables and which do not involve percent
- IVA2 - Solves real-world problems which do not require the use of variables and which do require the use of percent
- IVA3 - Solves problems that involve the structure and logic of arithmetic

### Geometry and Measurement Skills:

- IB1 - Rounds measurements to the nearest given unit of the measuring device used
- IB2a - Calculates distances
- IB2b - Calculates areas
- IB2c - Calculates volumes
- IIB1 - Identifies relationships between angle measures
- IIB2 - Classifies simple plane figures by recognizing their properties
- IIB3 - Recognizes similar triangles and their properties
- IIB4 - Identifies appropriate units of measurement for geometric objects
- IIIB1 - Infers formulas for measuring geometric figures
- IIIB2 - Selects applicable formulas for computing measures of geometric figures
- IVB1 - Solves real-world problems involving perimeters, areas, volumes of geometric figures
- IVB2 - Solves real-world problems involving the Pythagorean property

## MATHEMATICS SKILLS (Continued)

### Algebra Skills:

- IC1a - Adds and subtracts real numbers
- IC1b - Multiplies and divides real numbers
- IC2 - Applies the order-of-operations agreement to computations involving numbers and variables
- IC3 - Uses scientific notation in calculations involving very large or very small measurements
- IC4a - Solves linear equations
- IC4b - Solves linear inequalities
- IC5 - Uses given formulas to compute results, when geometric measurements are not involved
- IC6 - Finds particular values of a function
- IC7 - Factors a quadratic expression
- IC8 - Finds the roots of a quadratic equation
- IC9 - Solves a system of two linear equations in two unknowns
- IIC1 - Uses properties of operations correctly
- IIC2 - Determines whether a particular number is among the solutions of a given equation or inequality
- IIC3 - Recognizes statements and conditions of proportionality and variation
- IIC4 - Identifies regions of the coordinate plane which correspond to specified conditions and vice versa
- IIIC2 - Uses applicable properties to select equivalent equations and inequalities
- IVC1 - Solves real-world problems involving the use of variables, aside from commonly used geometric formulas
- IVC2 - Solves problems that involve the structure and logic of algebra

### Statistics Skills, Including Probability:

- ID1 - Identifies information contained in bar, line, and circle graphs
- ID2 - Determines the mean, median, and mode of a set of numbers
- ID3 - Uses the fundamental counting principle
- IID1 - Recognizes properties and interrelationships among the mean, median, and mode in a variety of distributions
- IID2 - Chooses the most appropriate procedure for selecting an unbiased sample from a target population
- IID3 - Identifies the probability of a specified outcome in an experiment
- IIID1 - Infers relations and makes accurate predictions from studying statistical data
- IVD1 - Interprets real-world data involving frequency and cumulative frequency tables
- IVD2 - Solves real-world problems involving probabilities

MATHEMATICS SKILLS (Continued)

Logical Reasoning:

- IE1 - Deduces facts of set inclusion or set non-inclusion from a diagram
- IIE1 - Identifies statements equivalent to the negations of simple and compound statements
- IIE2 - Determines equivalence or nonequivalence of statements
- IIE3 - Draws logical conclusions from data
- IIE4 - Recognizes that an argument may not be valid even though its conclusion is true
- IIIE1 - Recognizes valid reasoning patterns as illustrated by valid arguments in everyday language
- IIIE2 - Selects applicable rules for transforming statements without affecting their meaning
- IVE1 - Draws logical conclusions when facts warrant them

## APPENDIX B

### Skill Statements and Scoring Criteria for the Essay Subtest

#### SKILL STATEMENTS

The composition must give evidence that the student

1. Selects a subject which lends itself to development;
2. Determines the purpose and the audience for writing;
3. Limits the subject to a topic that can be developed within the requirements of time, purpose, and audience;
4. Formulates a thesis or statement of main idea that focuses the essay;
5. Develops the thesis or main idea statement by
  - a. providing adequate support that reflects the ability to distinguish between generalized and specific evidence,
  - b. arranging the ideas and supporting details in a logical pattern appropriate to the purpose and focus,
  - c. writing unified prose in which all supporting material is relevant to the thesis or main idea statement, and
  - d. writing coherent prose and providing effective transitional devices which clearly reflect the organizational pattern and the relationships of the parts;
6. Demonstrates effective word choice by
  - \*a. using words that convey the denotative and connotative meanings required by context,
  - b. avoiding inappropriate use of slang, jargon, cliches, and pretentious expressions, and
  - \*c. avoiding wordiness;
7. Employs conventional sentence structure by
  - \*a. placing modifiers correctly,
  - \*b. coordinating and subordinating sentence elements according to their relative importance,
  - \*c. using parallel expressions for parallel ideas, and
  - \*d. avoiding fragments, comma splices, and fused sentences;
8. Employs effective sentence structure by
  - a. using a variety of sentence patterns, and
  - b. avoiding overuse of passive constructions;
9. Observes the conventions of standard American English grammar and usage by
  - \*a. using standard verb forms,
  - \*b. maintaining agreement between subject and verb, pronoun and antecedent,
  - \*c. avoiding inappropriate shifts in tense,
  - \*d. using proper case forms,
  - e. maintaining a consistent point of view,
  - \*f. using adjectives and adverbs correctly, and
  - \*g. making logical comparisons;
- \*10. Uses standard practice for spelling, punctuation, and capitalization; and
11. Revises, edits, and proofreads units of discourse to ensure clarity, consistency, and conformity to the conventions of standard written American English.

\* Also assessed with objective items.

## SCORING CRITERIA

The essay subtest is scored independently by two evaluators, each of whom assigns the composition a score on a scale of 1 to 6. The scores are then combined for a total score of from 2 to 12, which is reported to the student. Papers judged to be off topic are assigned an "OT" instead of a numerical score. Below are the scoring criteria for the essay subtest according to the 6-point scale.

Score of 1. The paper generally presents a thesis that is vaguely worded or weakly asserted. Support, if any, tends to be rambling and/or superficial. The writer uses language that often becomes tangled, incoherent, and thus confusing. Errors in sentence structure, usage, and mechanics frequently occur.

Score of 2. The paper usually presents a thesis. The writer provides support that tends to be sketchy and/or illogical. Sentence structure may be simplistic and disjointed. Errors in sentence structure, usage, and mechanics frequently interfere with the writer's ability to communicate the purpose.

Score of 3. The paper presents a thesis and often suggests a plan of development, which is usually carried out. The writer provides support that tends toward generalized statements or a listing. In general, the support in a 3 paper is neither sufficient nor clear enough to be convincing. Sentence structure tends to be pedestrian and often repetitious. Errors in sentence structure, usage, and mechanics sometimes interfere with the writer's ability to communicate the purpose.

Score of 4. The paper presents a thesis and often suggests a plan of development, which is usually carried out. The writer provides enough supporting detail to accomplish the purpose of the paper. The writer makes competent use of language and sometimes varies the sentence structure. Occasional errors in sentence structure, usage, and mechanics do not interfere with the writer's ability to communicate the purpose.

Score of 5. The paper presents or implies a thesis and provides convincing, specific support. The writer's ideas are usually fresh, mature, and extensively developed. The writer demonstrates a command of language and uses a variety of structures. Control of sentence structure, usage, and mechanics, despite an occasional flaw, contributes to the writer's ability to communicate the purpose.

Score of 6. The paper presents or implies a thesis that is developed with noticeable coherence. The writer's ideas are usually substantive, sophisticated, and carefully elaborated. The writer's choice of language and structure is precise and purposeful, often to the point of being polished. Control of sentence structure, usage, and mechanics, despite an occasional flaw, contributes to the writer's ability to communicate the purpose.

APPENDIX C

Objective Subtests Answer Key

Subtest	Item	Answer	Skill	Subtest	Item	Answer	Skill
ELS	1	B	B1a	Mathematics (cont.)	14	B	IVA2
	2	E	B1c		15	C	IVA3
	3	C	B2a		16	A	IB1
	4	C	B2c		17	D	IB2a
	5	B	B2b		18	B	IB2b
	6	C	B4g		19	A	IB2c
	7	B	B4g		20	B	IIB1
	8	D	B4a		21	D	IIB2
	9	C	B4e		22	C	IIB3
	10	C	B4f		23	D	IIB4
	11	A	B4b1		24	D	IIIB1
	12	A	B4a		25	C	IIIB2
	13	D	B5c		26	C	IVB1
	14	D	B5a		27	B	IVB2
	15	C	B2d		28	B	IC1a
	16	D	B4c		29	C	IC1b
	17	B	B4b2		30	B	IC2
	18	C	B5b		31	A	IC3
	19	C	B2d		32	C	IC4a
Reading	1	A	A3		33	C	IC4b
	2	A	A1		34	B	IC4b
	3	B	B3		35	D	IC5
	4	B	A2		36	D	IC6
	5	C	B1		37	C	IC7
	6	D	B7		38	C	IC8
	7	A	B9		39	A	IC9
	8	C	B8		40	D	IIC1
	9	C	B6		41	A	IIC2
	10	B	B7		42	D	IIC3
	11	A	B6		43	C	IIC4
	12	C	B5		44	B	IIIC2
	13	B	B4		45	B	IVC1
	14	D	B2		46	A	IVC2
	15	B	B6		47	C	ID1
Mathematics	1	D	IA1a		48	C	ID2
	2	B	IA1b		49	D	ID3
	3	D	IA2a		50	C	IID1
	4	C	IA2b		51	C	IID2
	5	C	IA3		52	B	IID3
	6	C	IA4		53	C	IIID1
	7	D	IIA1		54	A	IVD1
	8	B	IIA2		55	D	IVD2
	9	A	IIA3		56	D	IE1
	10	C	IIA4		57	D	IIIE1
	11	B	IIA5		58	A	IIIE2
	12	B	IIIA1		59	D	IIIE3
	13	A	IVA1		60	C	IIIE4
			61		D	IIIE1	
			62		C	IIIE2	
			63		D	IVE1	





State of Florida  
Department of Education  
Tallahassee, Florida  
Betty Castor, Commissioner  
Affirmative action/equal opportunity employer

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