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ABSTRACT

This book contains all the worksheets needed to accompany the Comprehensive School Mathematics Program books for the Intermediate Grades, Part V. It includes 66 worksheets for The World of Numbers, 12 worksheets for the Languages of Strings and Arrows, 15 worksheets for Geometry and Measurement, and 11 worksheets for Probability and Statistics. (MNS)

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Comprehensive School Mathematics Program
CEMREL, Inc.
6-38001

CSMP Mathematics for the Intermediate Grades Part V

Name _____

Worksheets

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SE040721

WHAT'S IN THIS BOOK?

This book contains all the worksheets you will need during the semester. They are in the following order:

All the "N" worksheets — N01 through N66

All the "L" worksheets — L01 through L12

All the "G" worksheets — G01 through G15

All the "P" worksheets — P01 through P11

HOW DO YOU REMOVE PAGES?

Step 1: Flip through until you find the page you want. The number of each worksheet is in the top right corner of the page.

Step 2: Fold and crease the page along the perforation line.

Step 3: With your left hand index finger and thumb, press down firmly left of the perforation line and along center fold, starting at the top of the book.

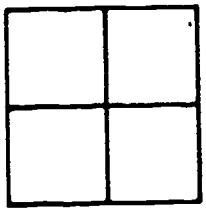
Step 4: With your right hand holding the top right corner of a page, tear along the perforation line. Follow the tear with your left hand holding down the center fold of the book.

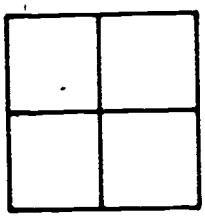
Name _____

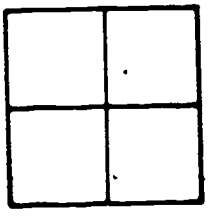
N 01 *

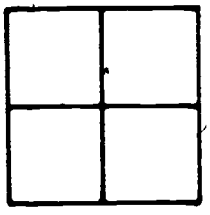
Put each number on the Minicomputer using exactly one of these checkers:

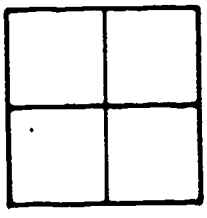
② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

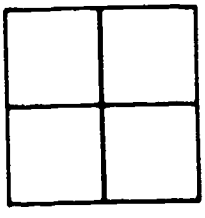
 = 14

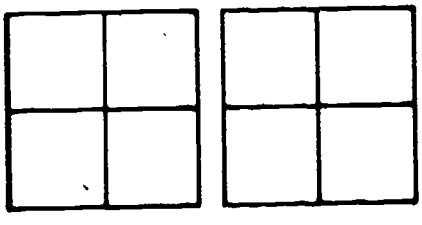
 = 24

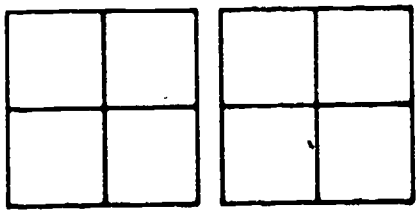
 = 40

 = 56

 = 48

 = 72

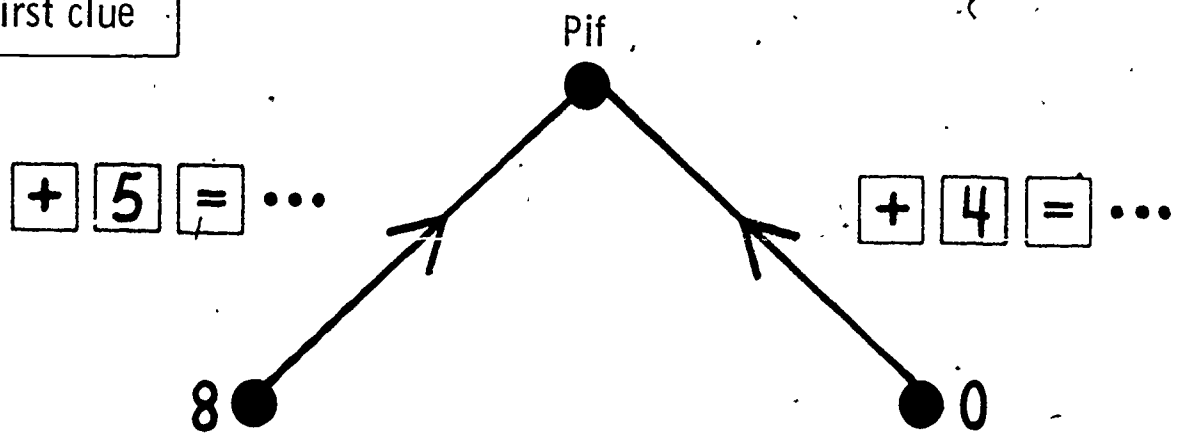
 = 200

 = 320

Name _____ N 02 **

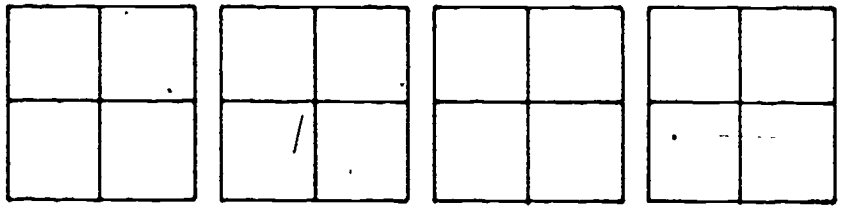
Pif is a secret number.

First clue



Pif could be ___, ___, ___, ___, ___, ___, ___, ___, and so on.

Second clue

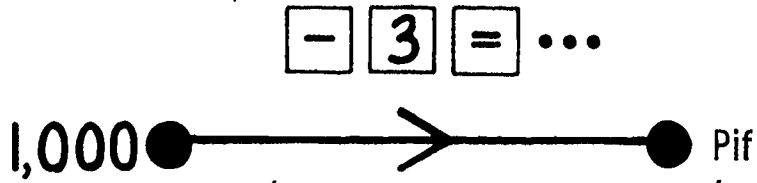


Pif can be put on the Minicomputer using exactly one of these checkers:

② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Pif is _____ or _____.

Third clue



Pif is _____.

Name _____

N 03 *

Complete these number stories.

$(8 \times 6) + (4 \div 2) =$ ___

$(8 \times (6 + 4)) \div 2 =$ ___

$((8 \times 6) + 4) \div 2 =$ ___

$8 \times ((6 + 4) \div 2) =$ ___

$8 \times (6 + (4 \div 2)) =$ ___

Name _____

N 04 **

First clue

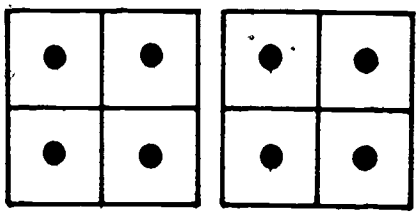
Rig forgot to put the parentheses in his signature:

$$2 \times 3 + 4 \times 5$$

Show all the possible ways to put parentheses in this expression and find the numbers that Rig could be.

Rig could be _____, _____, _____, or _____.

Second clue



By moving exactly two of these checkers to other squares, you will find Rig.
Rig could be _____ or _____.

Third clue

Rig is not a positive divisor of 200.

Rig is _____.

Name _____

N 05 ***

Pim and Pam are different secret numbers.

First clue

Pim and Pam both forgot to put the parentheses in their signatures.

Pim's signature: $6 \times 8 + 4 \div 2$

Pam's signature: $6 + 8 \times 4 - 2$

Pim could be _____, _____, _____, or _____.

Pam could be _____, _____, _____, or _____.

Second clue

$Pim =_3 Pam$

(Pim, Pam) could be (____, ____) or (____, ____) or (____, ____).

Third clue

5 is not a divisor of Pim.

Pim is _____. Pam is _____.

Name _____ N 06 ****

First clue

Crack forgot to put the parentheses in his signature.

$$6 + 5 \times 4 - 3 \times 2$$

On a separate sheet of paper, find all the possible ways to put parentheses in the expression.

Crack could be _____

_____.

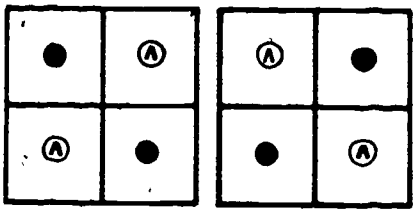
(Hint: There are between seven and fourteen possibilities for Crack.)

Second clue

$$\text{Crack} =_3 100$$

Crack could be _____, _____, _____, _____, or _____.

Third clue



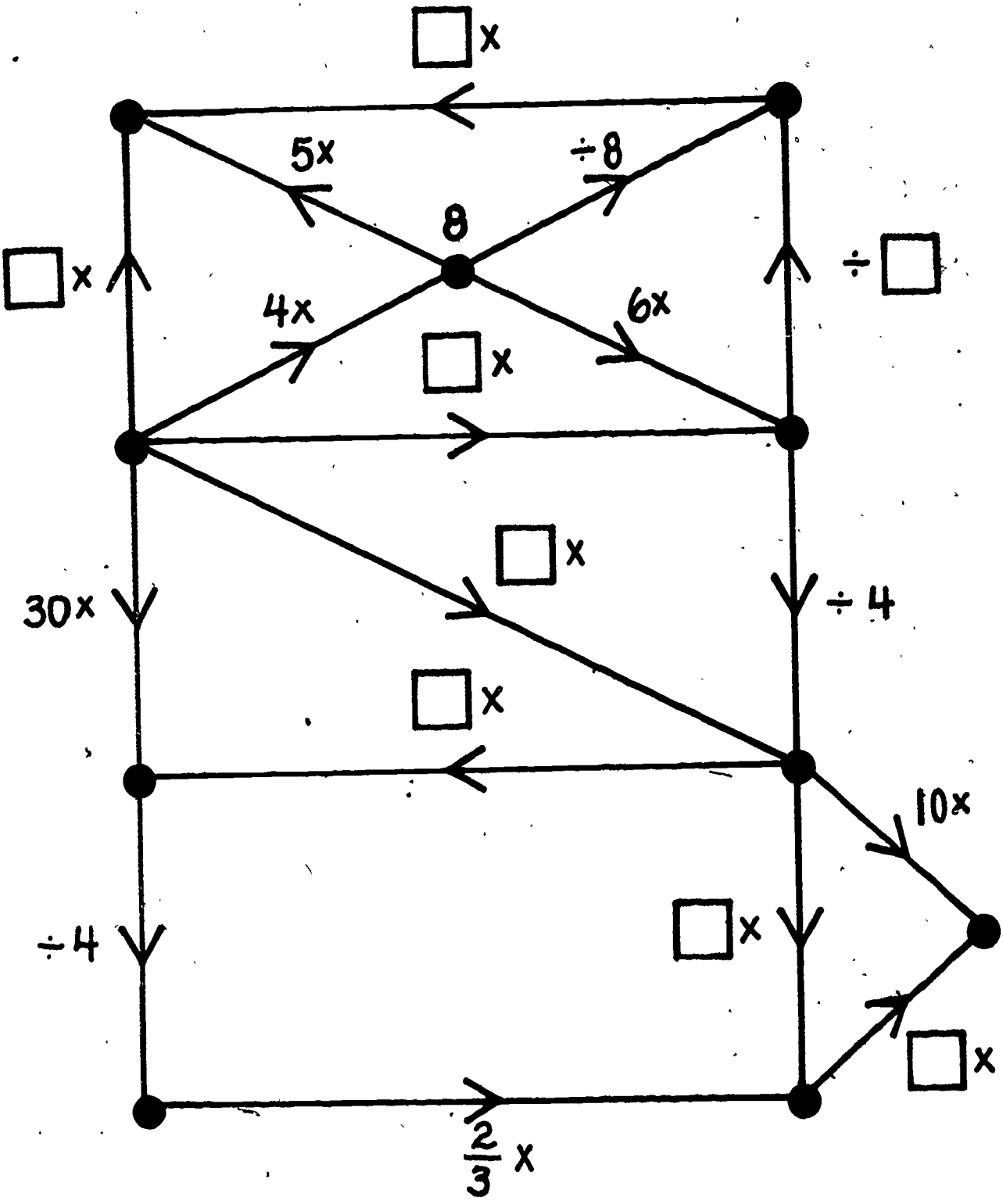
By moving exactly one of these checkers to another square, you will find Crack.

Crack is _____.

Name _____

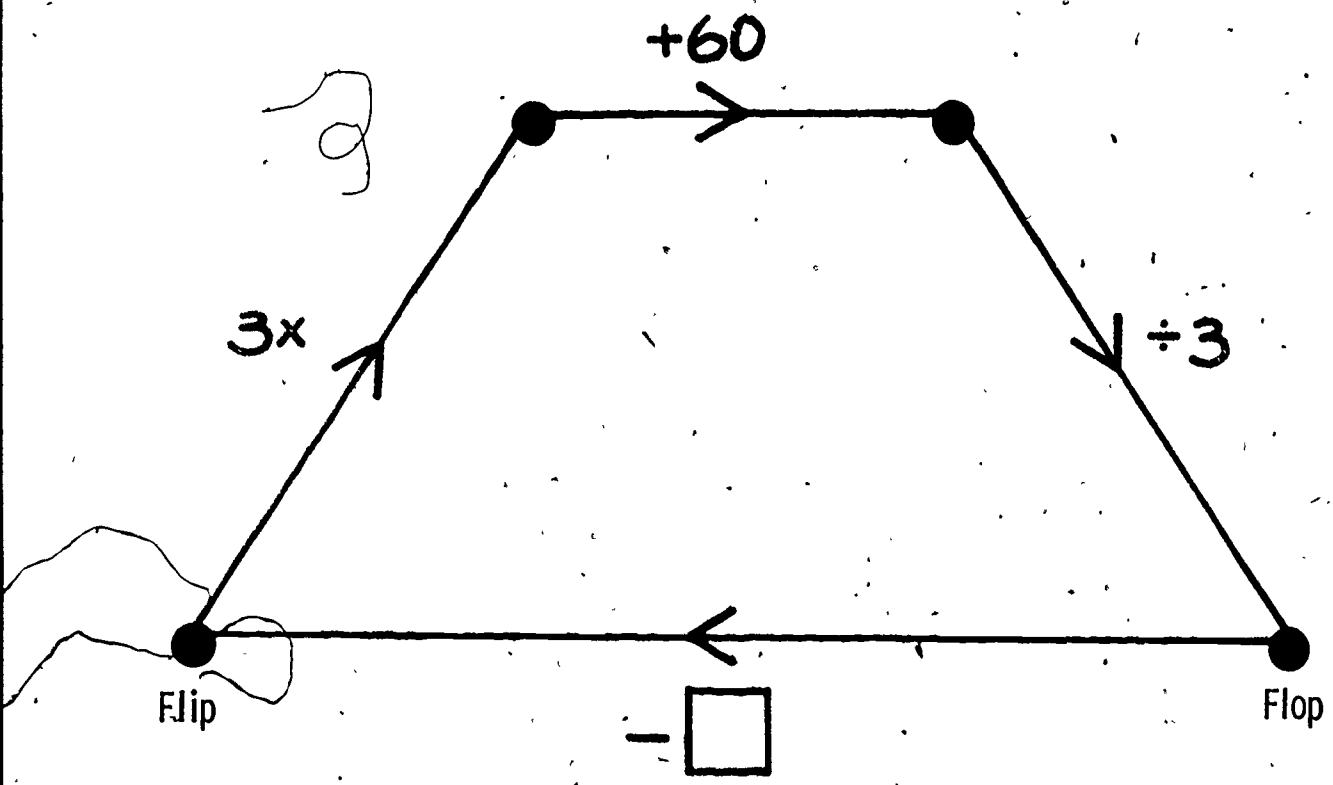
N 07 *

Label the dots and fill in the boxes for the arrows.



Name _____

N 08 **



Complete these charts and fill in the box for the arrow from Flop to Flip.

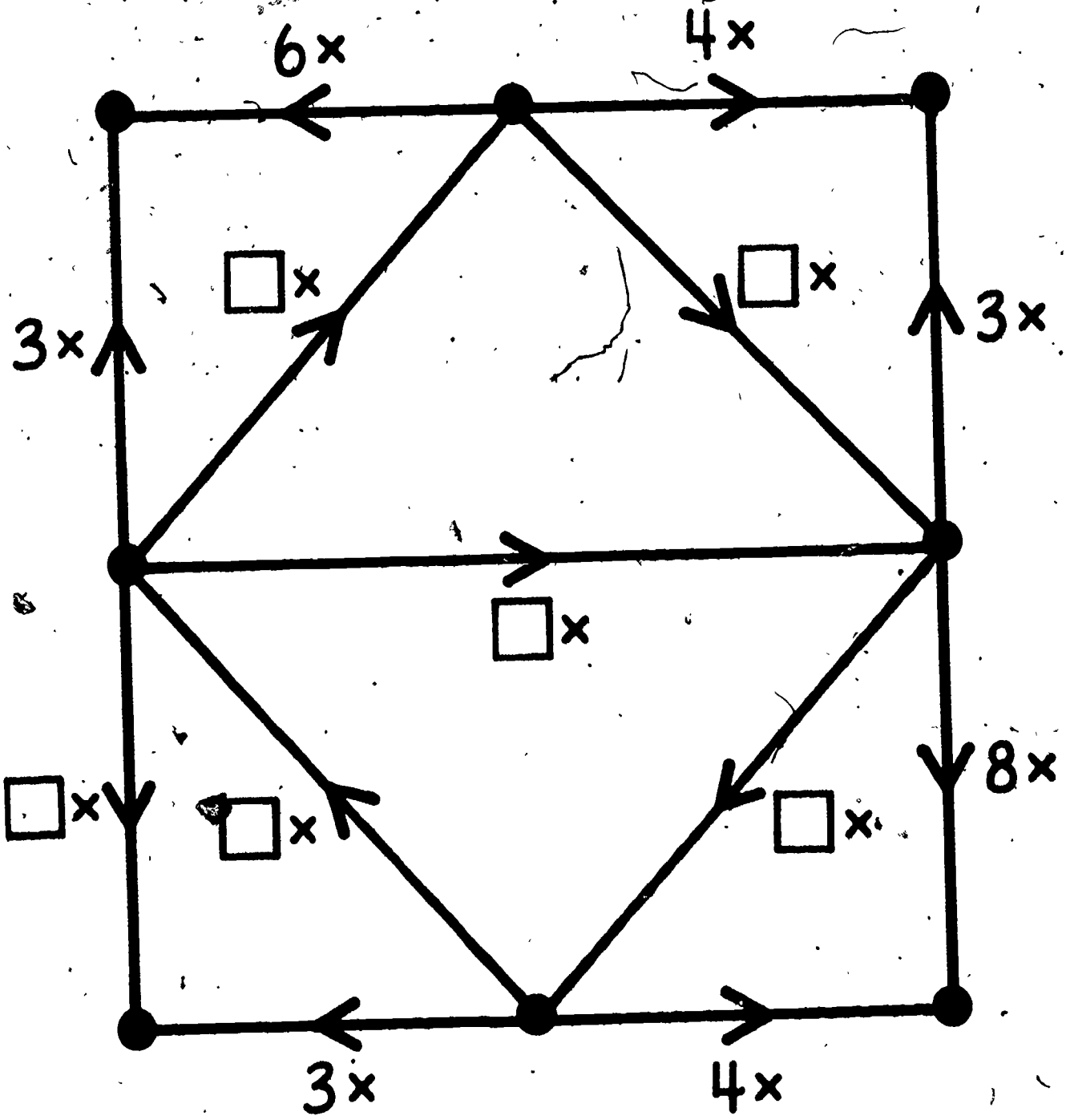
Flip	Flop
2	
5	
	30

Flip	Flop
0.2	
1.5	
	30.5

Name _____

N 09 ***

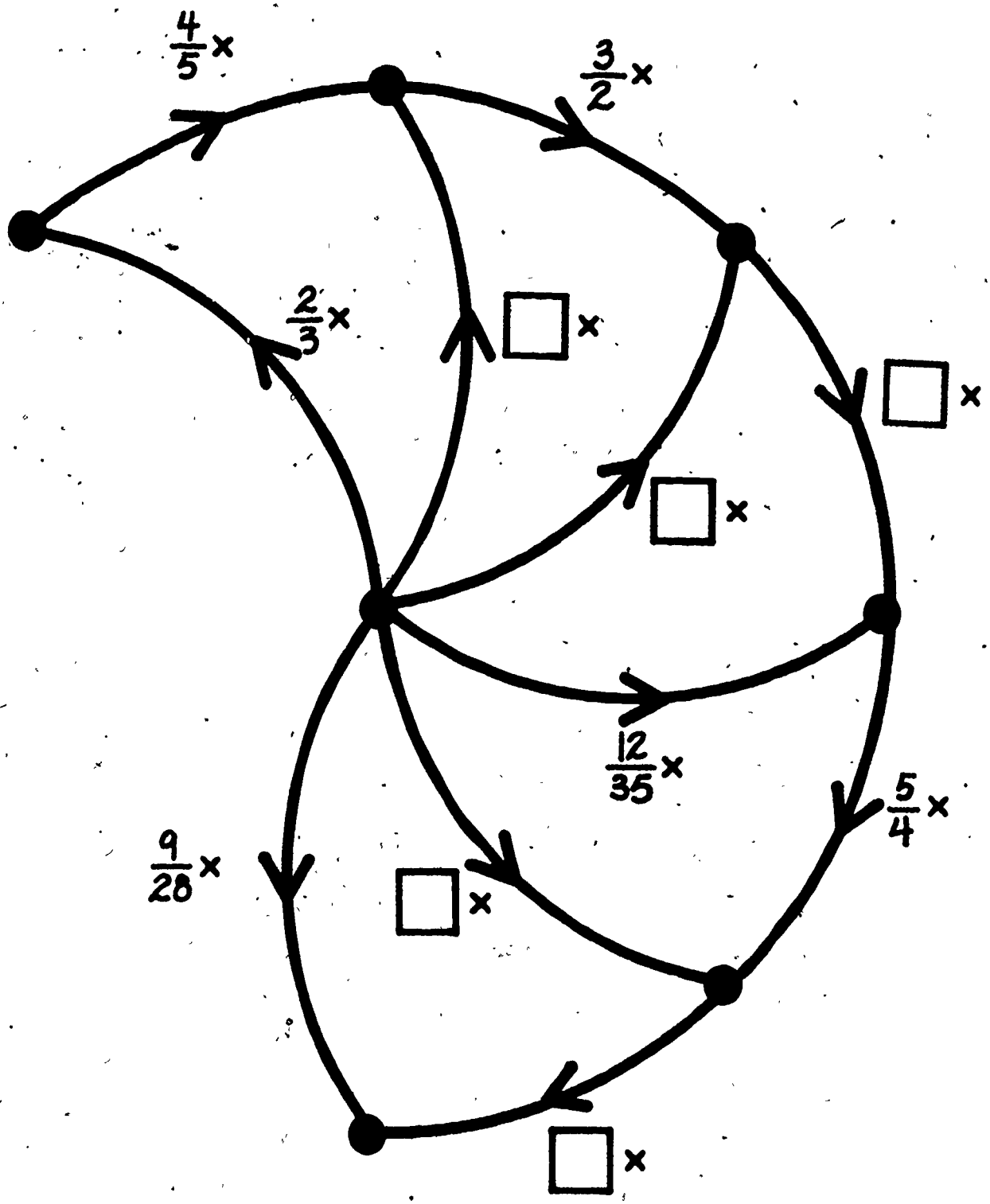
Fill in the boxes for the arrows.



Name _____

N 10 ****

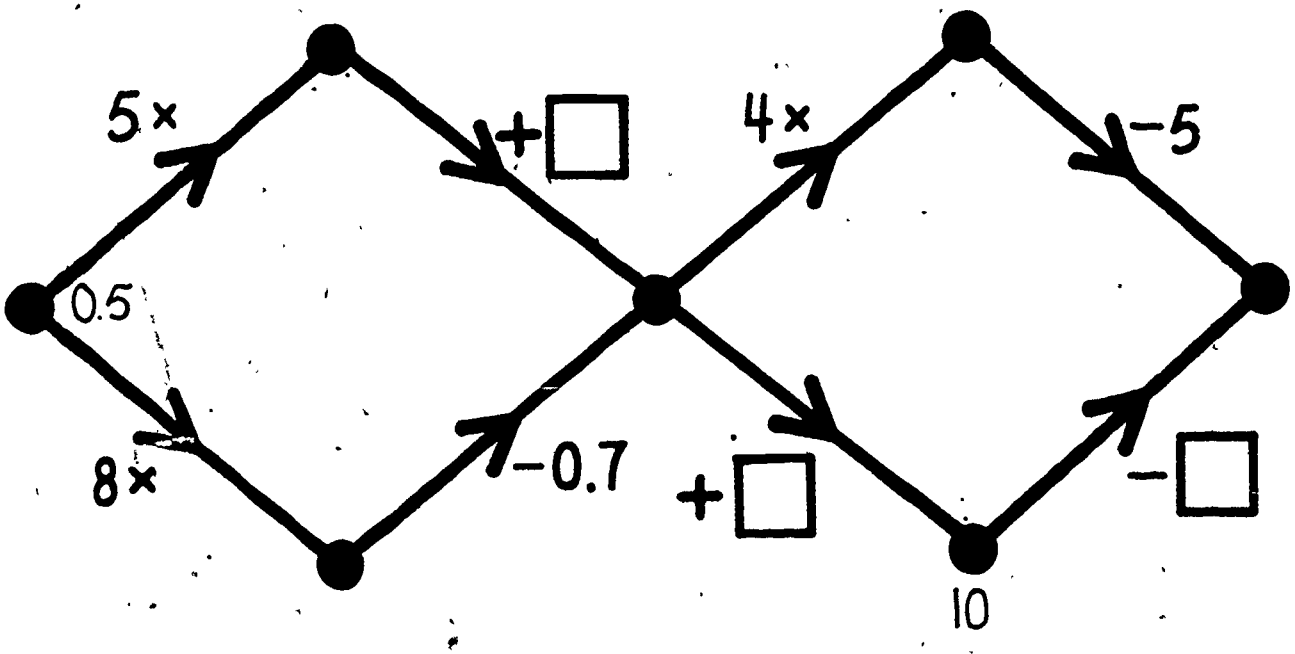
Fill in the boxes for the arrows.

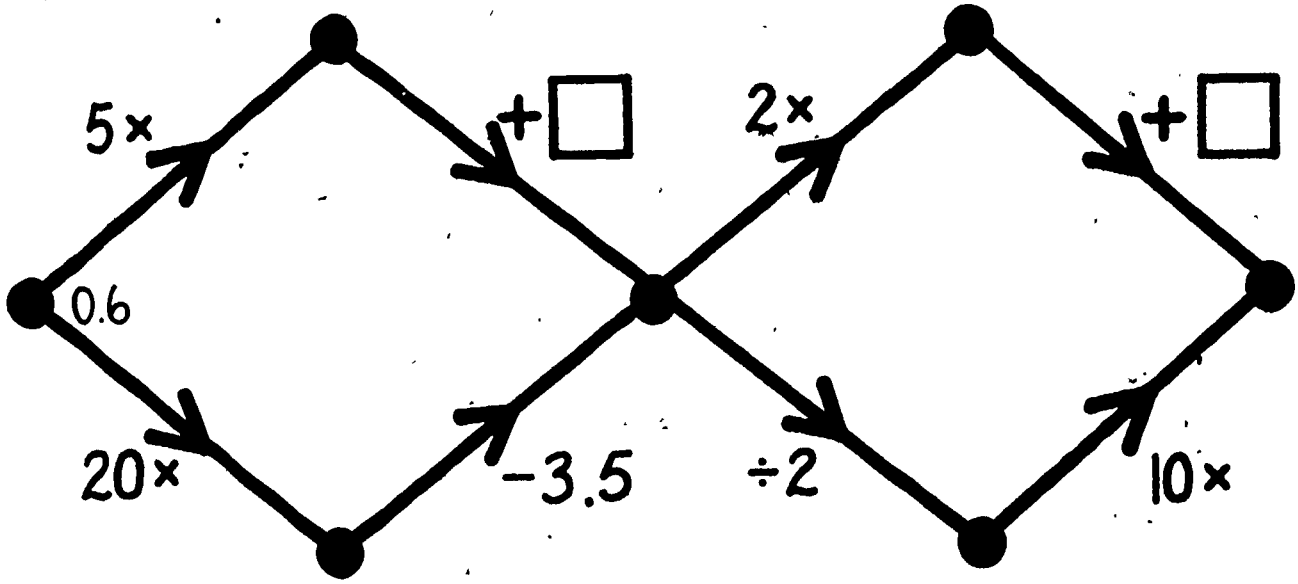


Name _____

N 11 *

Label the dots and fill in the boxes for the arrows.





Name _____

N 12 **

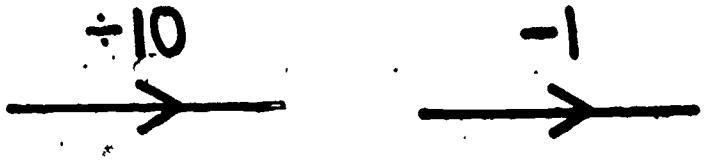
Pair the tags.

$6\times$	$\frac{5}{6}\times$
$\div 10$	$4\times$
$20\times$	$+6.4$
$+1.9$	$40\times$
-0.35	$+9.94$

Name _____

N 13 ***

First clue

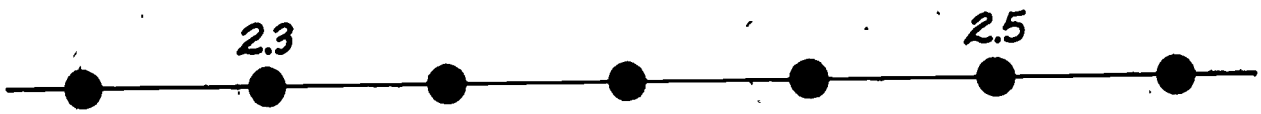


Flip is the ending number of an arrow road starting at 256 and using exactly two red arrows and two blue arrows.

256

Flip could be _____, _____, _____, _____, _____, or _____.

Second clue



Label each dot. Flip is one of these numbers.

Flip is _____.

Name _____

N 14 ****

Put each number on a hand-calculator using just these keys:

[2], [8], [+], [−], [×], [÷], [=]

Write the keys in the order you use them. You may use a key more than once.

It costs 1¢ each time you press a key. Try not to spend more than 15¢ for each number.

2.8 _____

0.03 _____

0.88 _____

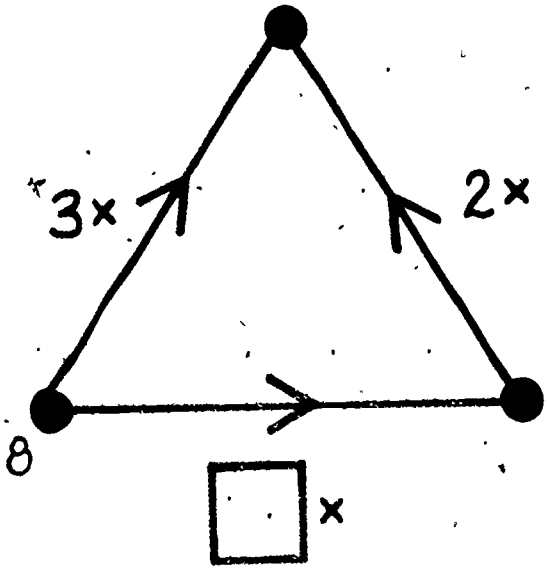
8.4 _____

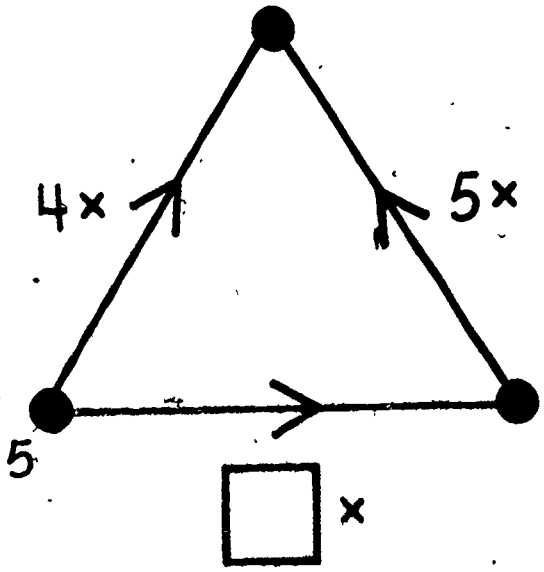
0.18 _____

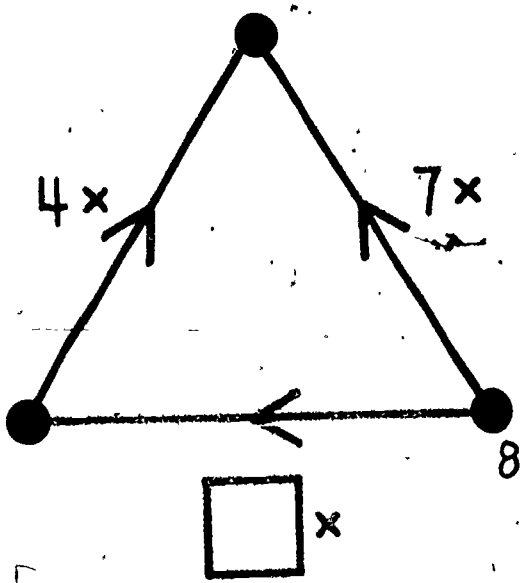
Name _____

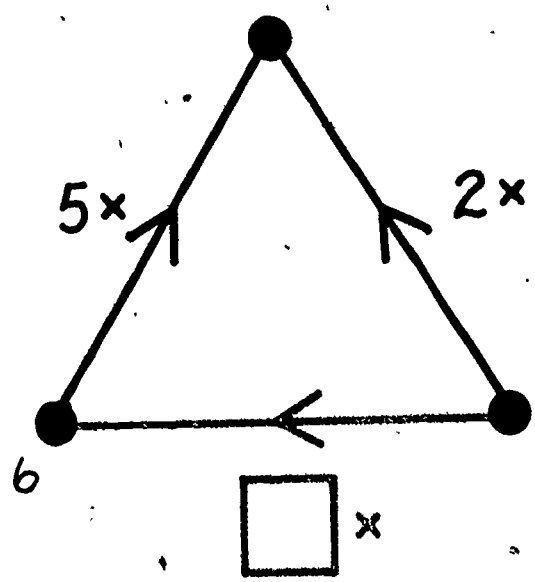
N 15 *

Label the dots and fill in the boxes for the arrows.









Name _____ N 16 **

Pair the tags.

$\frac{2}{3}\times$	$\frac{5}{7}\times$
$\frac{3}{4}\times$	$\frac{20}{9}\times$
$\frac{7}{6}\times$	$\frac{5}{4}\times$
$\frac{3}{8}\times$	$+12.8$
$\frac{3}{10}\times$	$\frac{10}{9}\times$

Name _____

N 17 ***

Build a red-blue road from 15 to 1.

+ 0.02

× 0.4

1

15

Name _____

N 18 ****

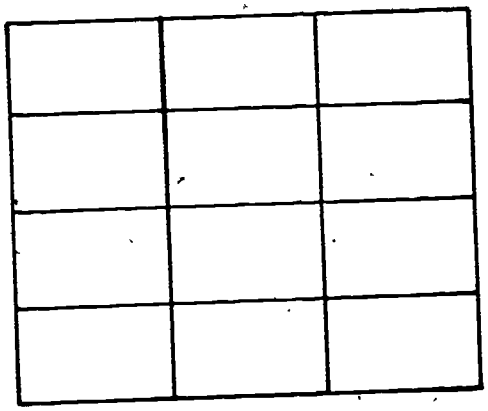
Pair the tags.

$\times 0.5$	$\div 9$
$\times 7.5$	$\frac{2}{3}\times$
$\times 0.15$	-4.49
$\times 0.025$	-0.002
$\times 0.02$	$\frac{1}{30}\times$

Name _____

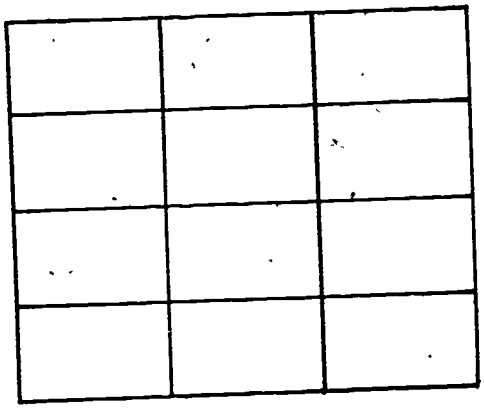
N 19 *

Color one-third of this region red and fill in the box.



$$\frac{1}{3} = \frac{\square}{12}$$

Color three-fourths of this region red and fill in the box.



$$\frac{3}{4} = \frac{\square}{12}$$

Complete the calculation.

$$\frac{1}{3} + \frac{3}{4} = \frac{\square}{12} + \frac{\square}{12} = ____$$

Name _____

N 20 **

Write at least five fractions for $\frac{1}{4}$.

Write at least five fractions for $\frac{8}{5}$.

Complete the calculation.

$$\frac{1}{4} + \frac{8}{5} = ____$$

Name _____

N 21 ***

Draw as many red arrows as possible between these dots.

is less than →

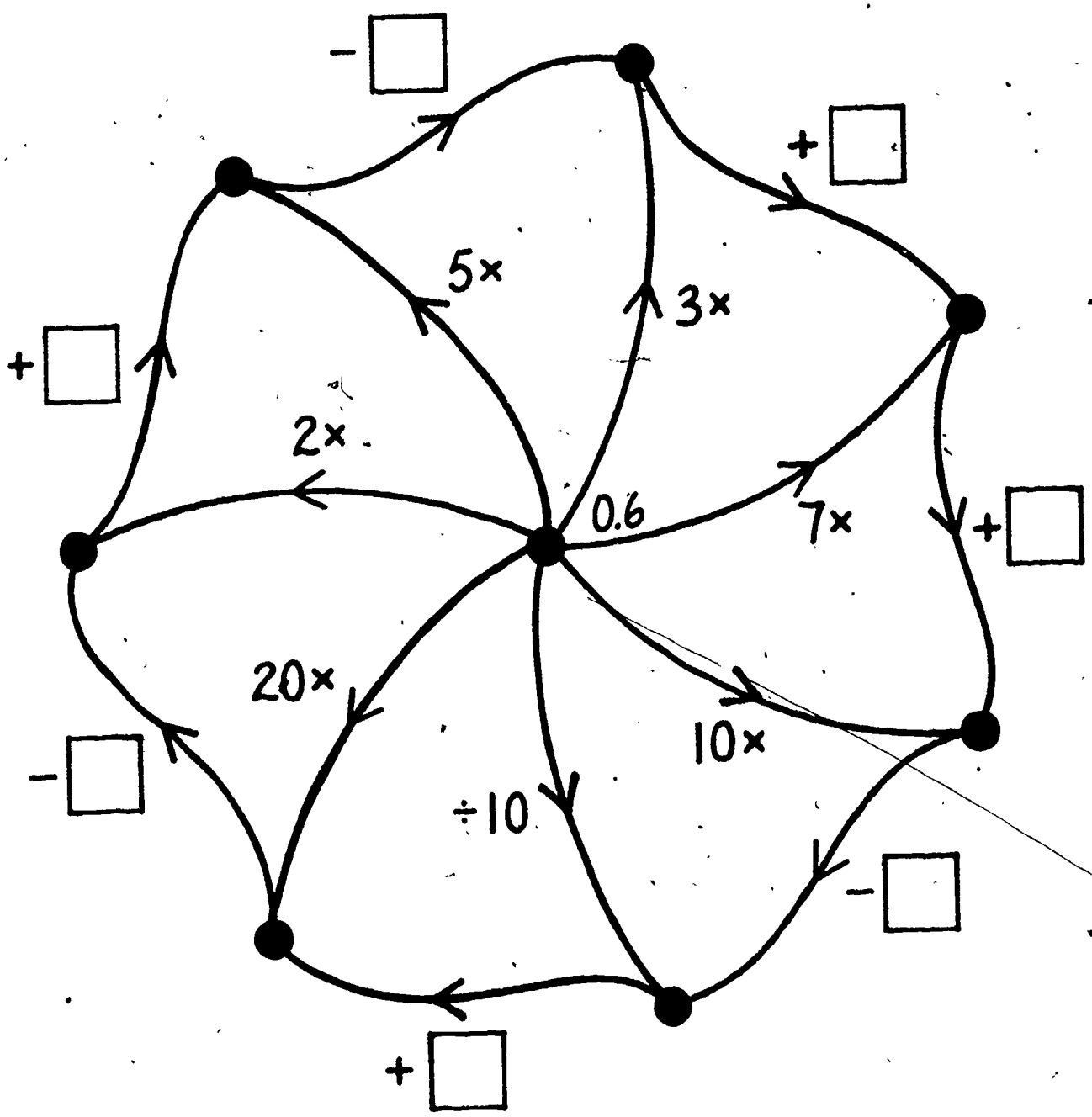
$\frac{1}{2}$ $\frac{2}{3}$ $\frac{3}{4}$

$\frac{1}{2}+\frac{2}{3}$ $\frac{1}{2}+\frac{3}{4}$ $\frac{2}{3}+\frac{3}{4}$

Name _____

N 22. *

Label the dots and fill in the boxes for the arrows.



Name _____

N 23 **

Pair the tags.

× 0.2	+ 5.8
÷ 10	+ 2.3
− 0.8	× 30
× 0.3	× 7.5
+ 2.7	× 15
× 0.4	× 10

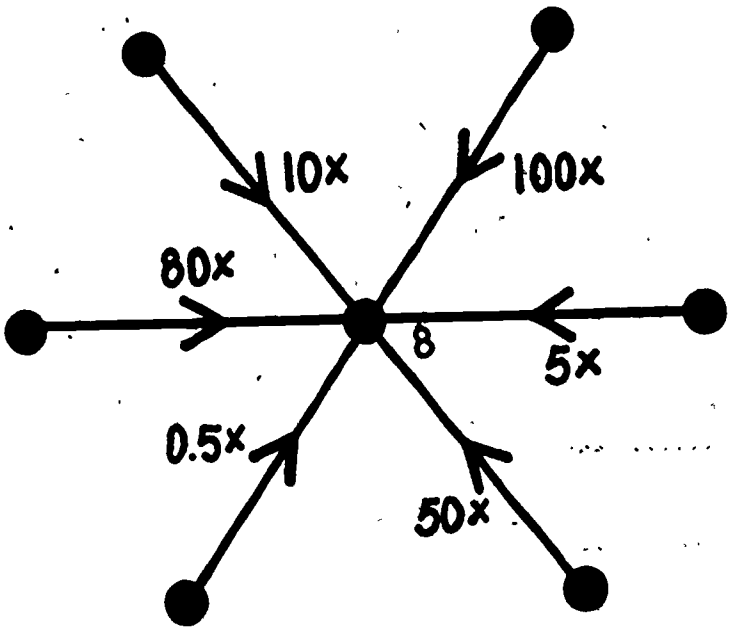
Name _____

N 24 ***

Rack is a secret number.

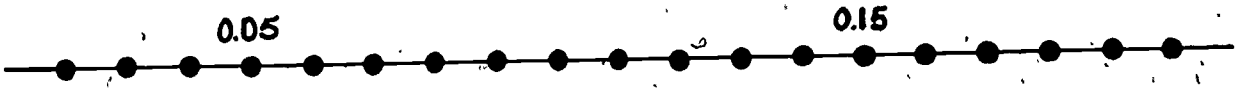
First clue

Rack is in this picture.



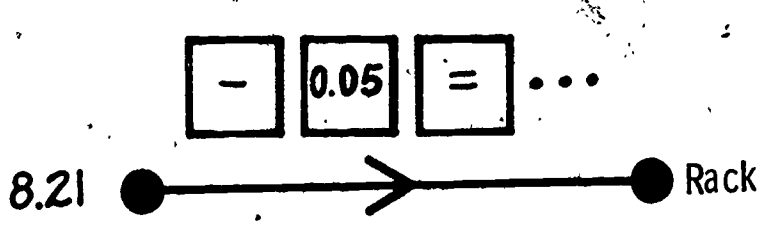
Second clue

One of these dots is for Rack.



Rack could be _____, _____, or _____.

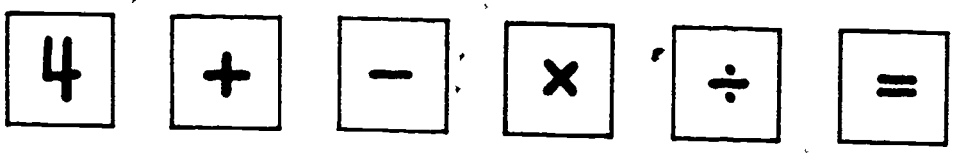
Third clue



Rack is _____.

Name _____ N 25 ****

Put each number on the hand-calculator using just these keys:



Write the keys in the order you use them. You may use a key more than once.

It costs 1¢ each time you press a key. Try not to spend more than 20¢ for each number.

0.1 _____

3.2 _____

$\frac{7}{8}$ _____

$\frac{7}{5}$ _____

$\frac{5}{32}$ _____

Name _____

N 26

Fill in the boxes.

$a * b = (a \times b) + 1$

$5 * 8 =$ ☐

$7 * 7 =$ ☐

$3 * 8 =$ ☐

$5 * 11 =$ ☐

$20 * 3 =$ ☐

$25 * 4 =$ ☐

$6 * ☐ = 49$

$☐ * 9 = 55$

$8 * ☐ = 33$

$☐ * 4 = 45$

Fill in the boxes.

$a * b = (a \times b) + 1$

$2 * 0.7 = \square$

$5 * 0.6 = \square$

$6 * 7 = \square$

$6 * 0.7 = \square$

$8 * 5 = \square$

$0.8 * 5 = \square$

$0.8 * 0.5 = \square$

$10 * \square = 7$

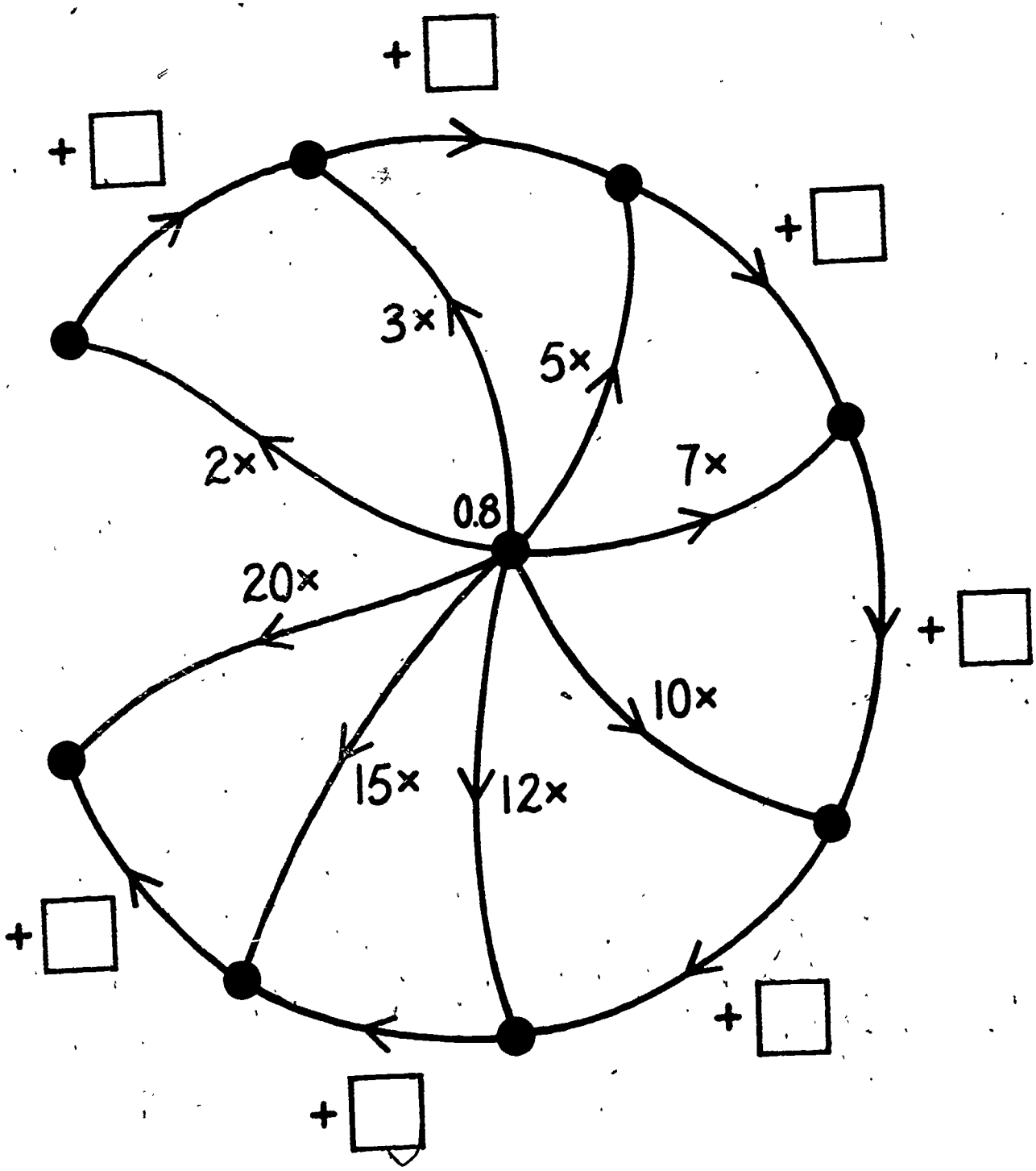
$\square * 4 = 3$

$8 * \square = 3.4$

Name _____

N 27 *

Label the dots and fill in the boxes for the arrows.



Name _____

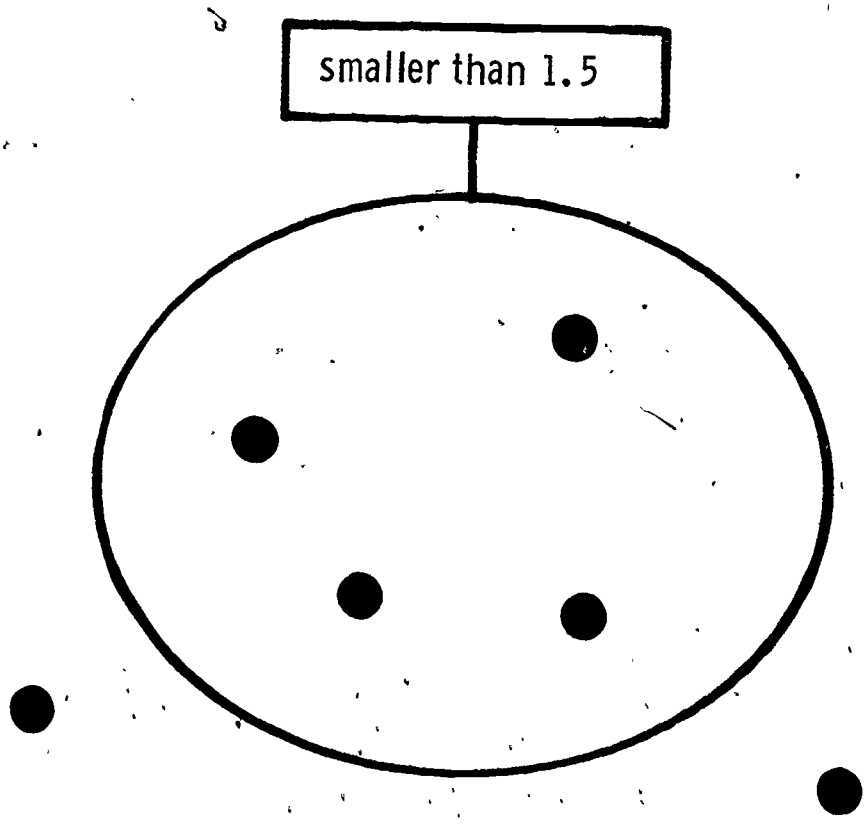
N 28 **

Put these numbers in the string picture.

5×0.3 0.5×0.3 2×0.8 0.2×0.8

$\frac{1}{2} \times 0.3$ 30×0.05 $\frac{1}{2} \times 1.5$

$3.1 - 1.5$ $2 - 1.84$ 10×0.05 20×0.14



Name _____

N 29 *

$\frac{a}{b} = \frac{c}{d}$

a	c
b	d

$a \times d = b \times c$

Complete.

3	6
5	

2	5
4	

3	4
	8

5	
6	12

6	4
	6

5	
10	14

	9
10	15

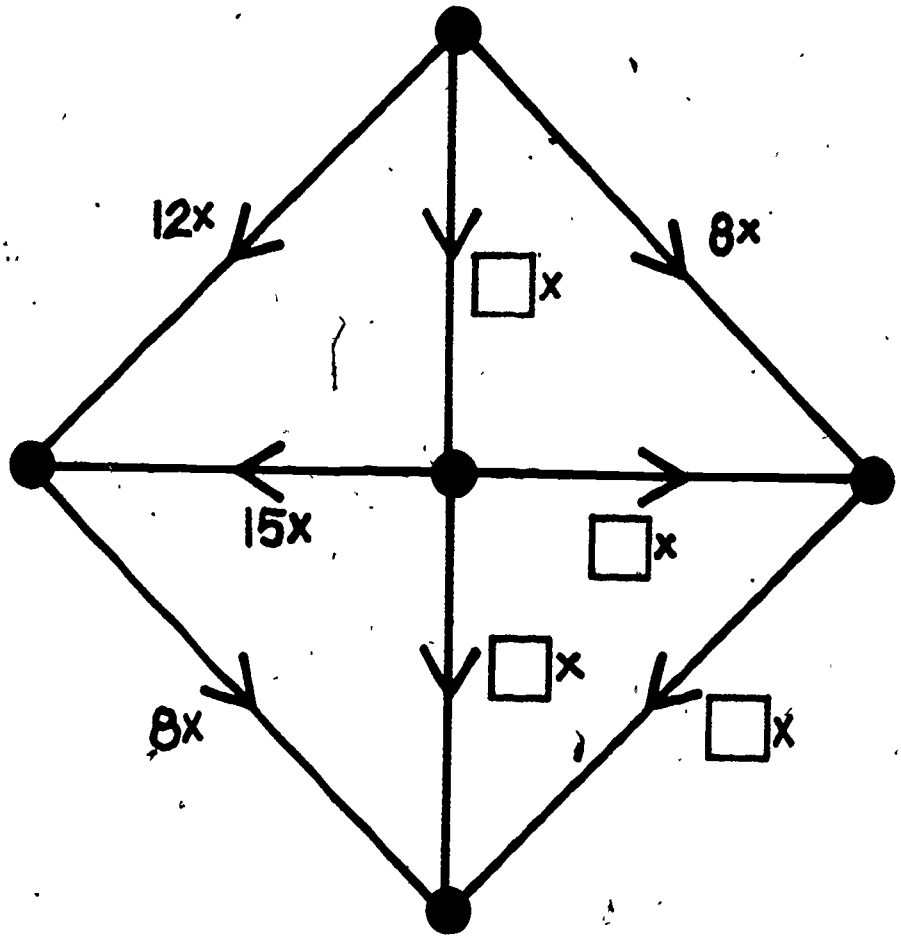
6	
15	20

	15
8	12

Name _____

N 30 **

Fill in the boxes for the arrows.



The picture suggests two ways to fill in the box for the blue arrow.

They are: □x or □x

There are many other ways. Fill in the boxes to show some of them.

□x, □x, □x, □x, □x, □x.

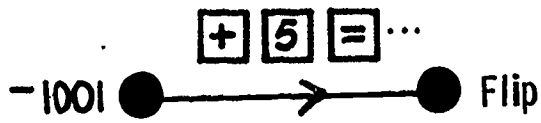
Name _____

N 31 ***

Flip and Flop are secret whole numbers.

9	Flop
Flip	12

The prime factor distance between Flip and Flop is 5.



Flip is _____; Flop is _____.

Name _____

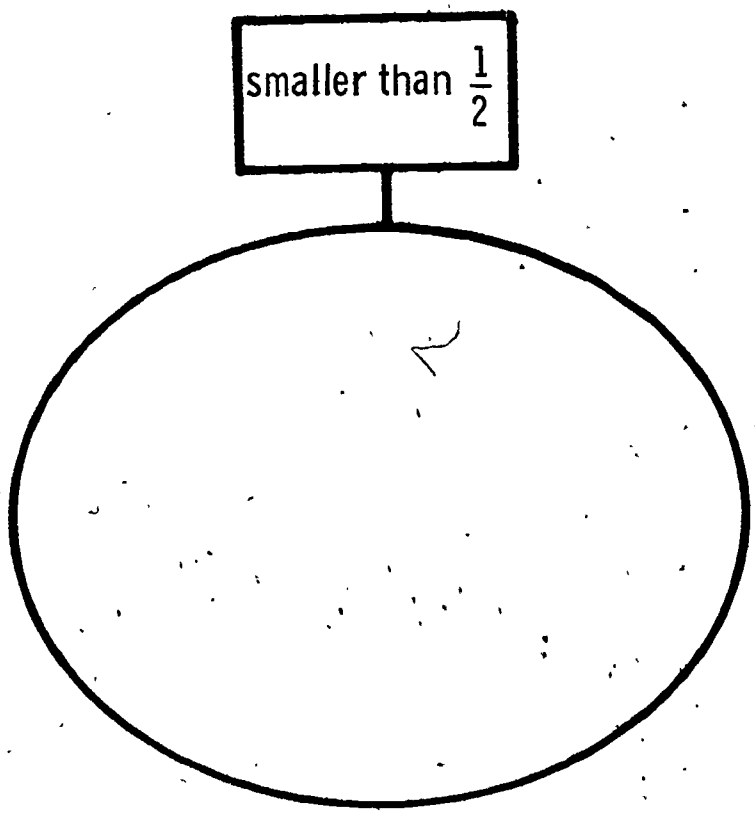
N 32 *

Put these numbers in the string picture.

0.7 $\frac{1}{4}+\frac{3}{4}$ $\frac{1}{2}\times\frac{1}{3}$

$\frac{2}{10}+\frac{5}{10}$ $\frac{3}{2}\times\frac{2}{3}$ 0.1 $\frac{5}{6}-\frac{4}{6}$

$\frac{1}{5}\times\frac{1}{2}$ 0.25 $\frac{1}{3}+\frac{1}{4}$



Name _____

N 33 **

Pair the tags.

$\frac{3}{4} + \frac{17}{12}$

$1 - \frac{5}{7}$

$\frac{3}{5} \times \frac{5}{3}$

$\frac{2}{3} + \frac{3}{2}$

$\frac{1}{2} \times \frac{4}{7}$

$2 - \frac{1}{3}$

$4 \times \frac{5}{12}$

$3 \times \frac{3}{12}$

0.75

$\frac{6}{11} + \frac{5}{11}$

ERIC

Name _____

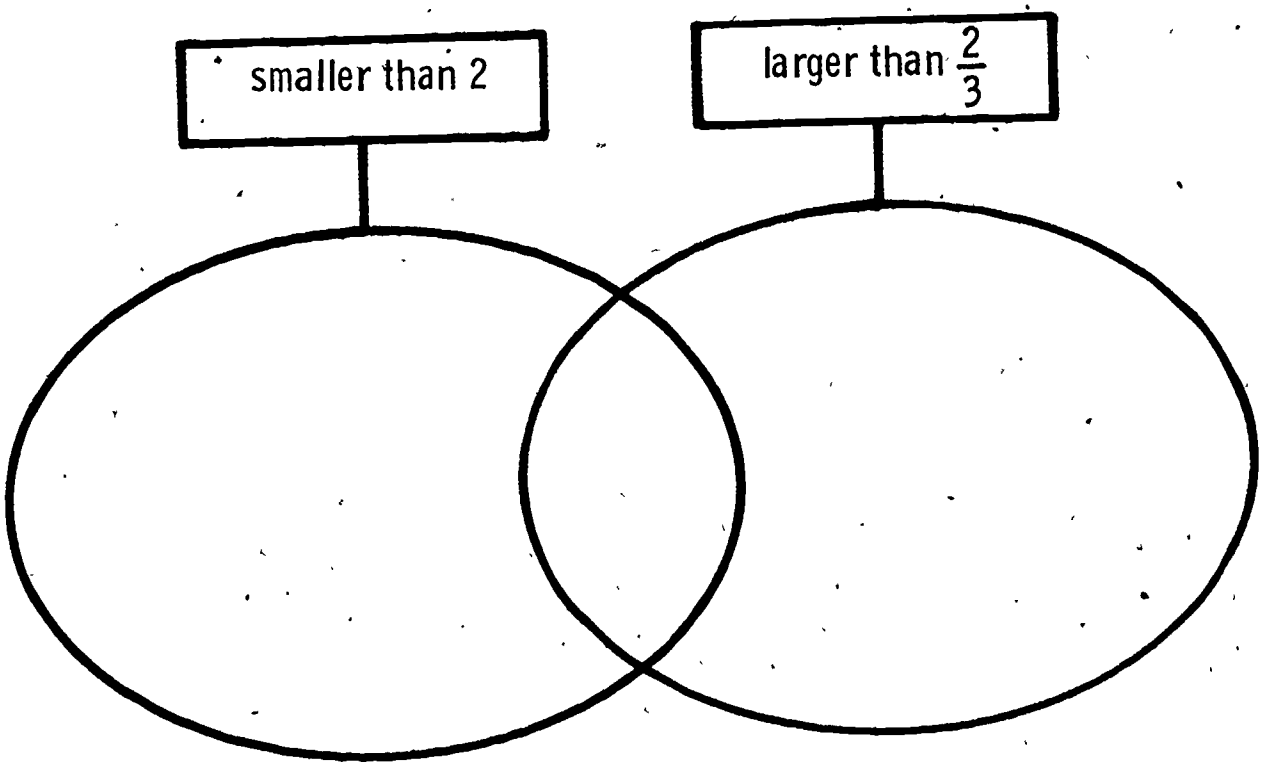
N 34 ***

Put these numbers in the string picture.

1.2 $\frac{1}{2}$ $\frac{3}{4} + \frac{5}{4}$ 0.6

$\frac{2}{5} \times \frac{5}{2}$ $\frac{1}{2} \times 4$ $\frac{3}{5}$ $\frac{2}{10} + \frac{3}{10}$

$\frac{6}{5}$ 2.5 $\frac{2}{7} + \frac{5}{7}$ $2 \times \frac{5}{4}$



Name _____

N 35

Complete the tables.

×	$\frac{1}{2}$	$\frac{3}{4}$
$\frac{2}{3}$		
$\frac{3}{2}$		

÷	$\frac{1}{2}$	$\frac{3}{4}$
$\frac{2}{3}$		
$\frac{3}{2}$		

+	$\frac{1}{2}$	$\frac{3}{4}$
$\frac{2}{3}$		
$\frac{3}{2}$		

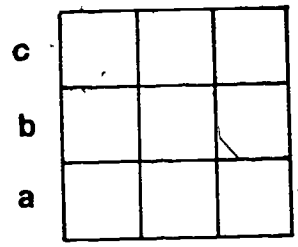
ERIC

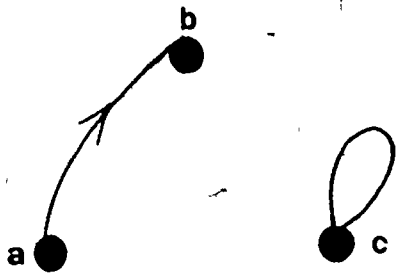
Name _____

N 36 *

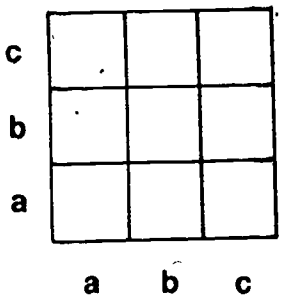
Complete the grid and find the code number for each arrow picture.

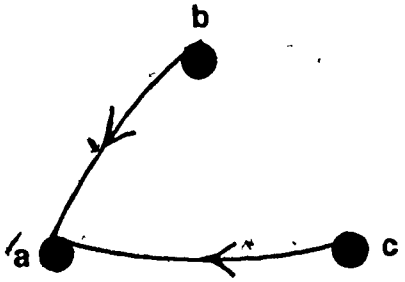
Code number _____



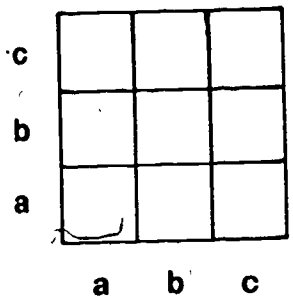


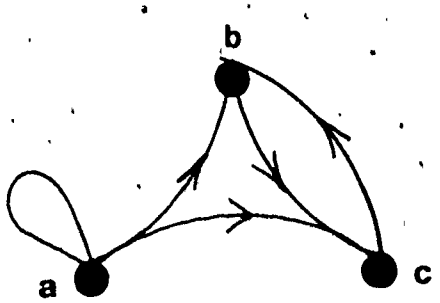
Code number _____



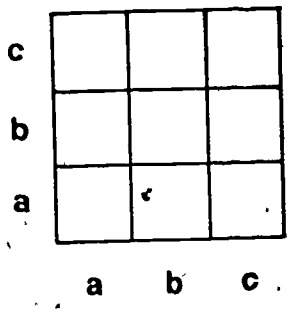


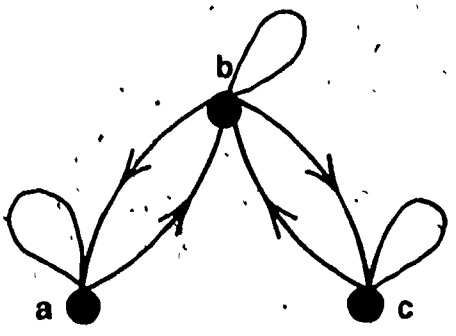
Code number _____





Code number _____



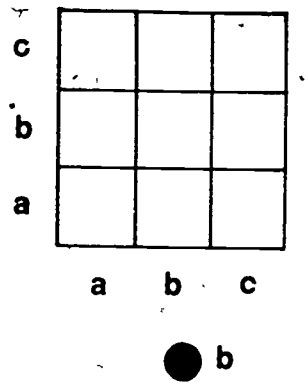


Name _____

N 37 **

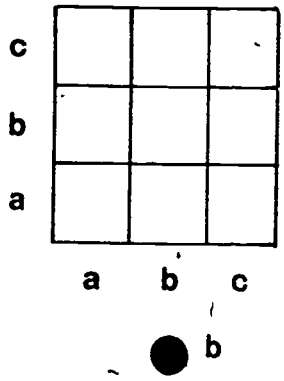
Complete the grid and draw the arrow picture for each code number.
Is the arrow picture for a function? Circle your answer.

Code number 35



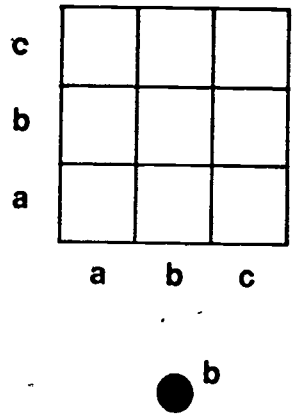
a ● Function ● c Non-function

Code number 15



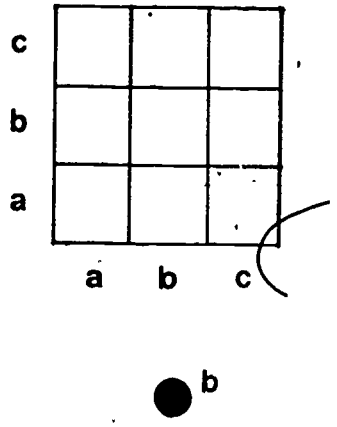
a ● Function ● c Non-function

Code number 94



a ● Function ● c Non-function

Code number 340

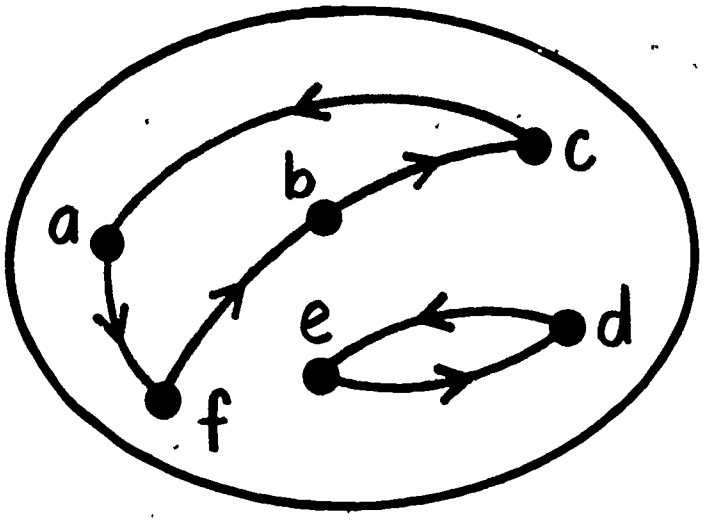


a ● Function ● c Non-function

Name _____

N 38

Fill in the grid for this arrow picture.

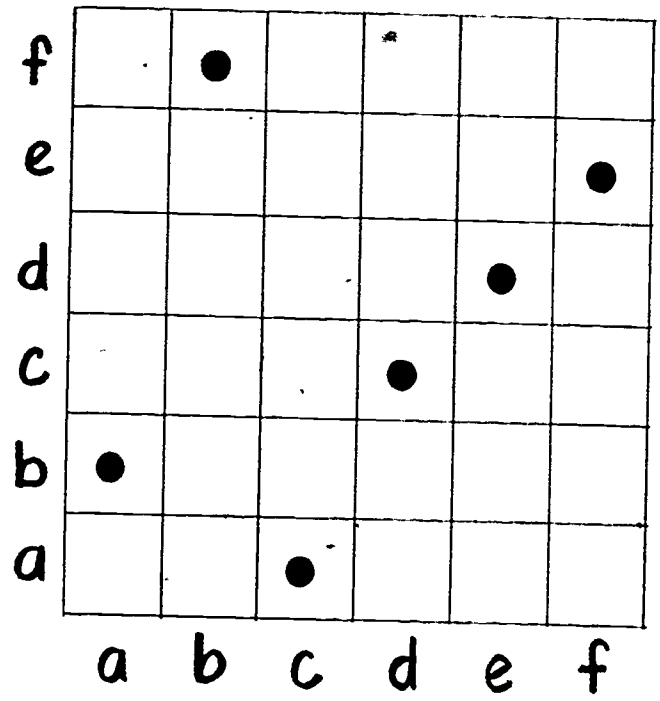


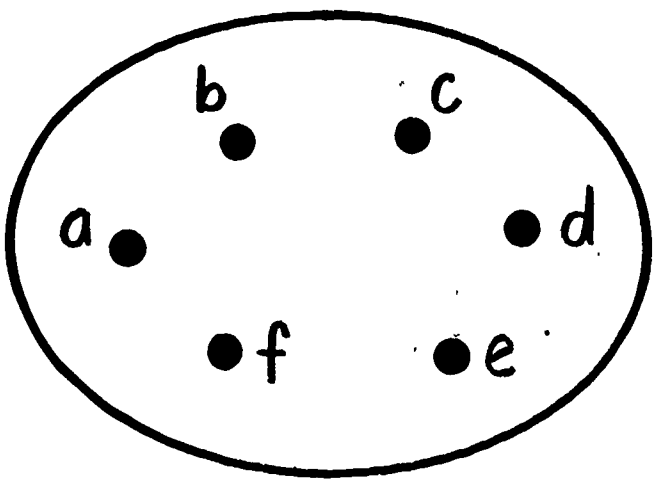
	a	b	c	d	e	f
f						
e						
d						
c						
b						
a						

Name _____

N 39

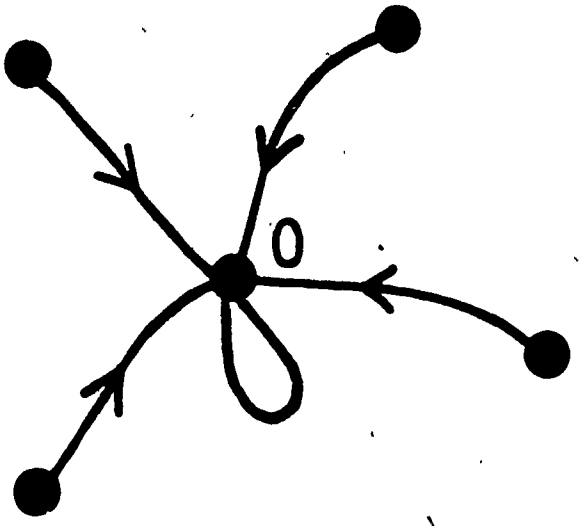
Draw the arrow picture for this grid.

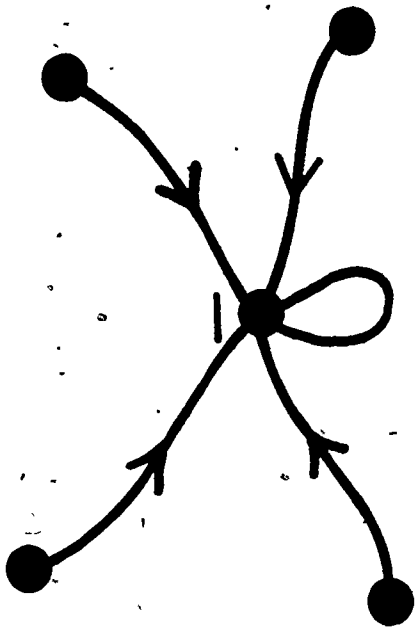


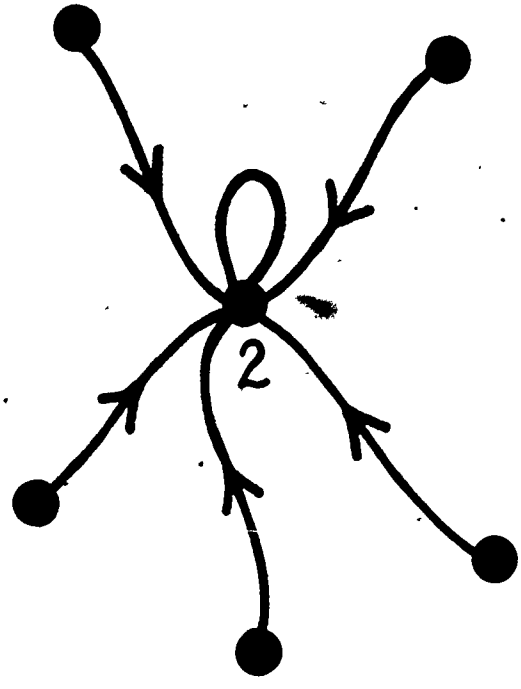


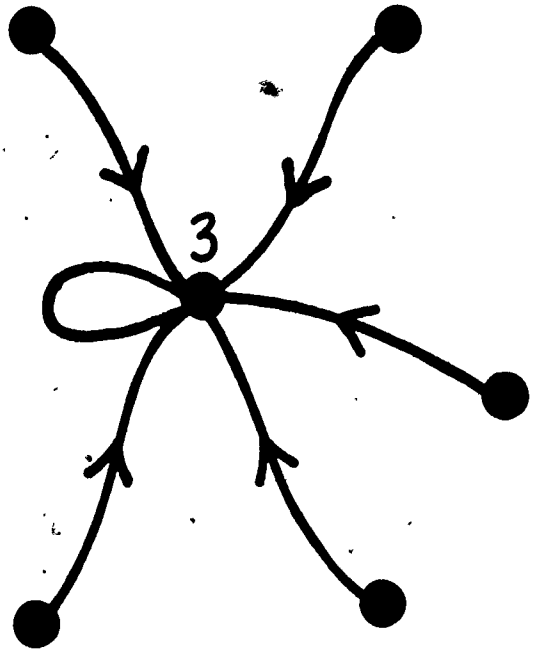
Name _____

N 40









Name _____ N 41

Fill in the table.

▲ = 4	10	21	52	79	98
8					
75					
11					
1,002					
25					
78					

Name _____

N 42 *

Complete the table.

$=_4$	81	73	28	Bim	70	77
55						
92						
Bam		F		T	F	
194						
201				F		
216				F		

Name _____ N 43 **

First clue

Flip is a secret whole number between 10 and 20.
Flop is a secret whole number between 40 and 50.

Second clue

$=_4$	Blop	15	52
Blip	True	False	False
25	False		
71	False		

Complete this table and write the four couples of numbers that (Blip, Blop) could be.

(____, ____) (____, ____) (____, ____) (____, ____)

Third clue

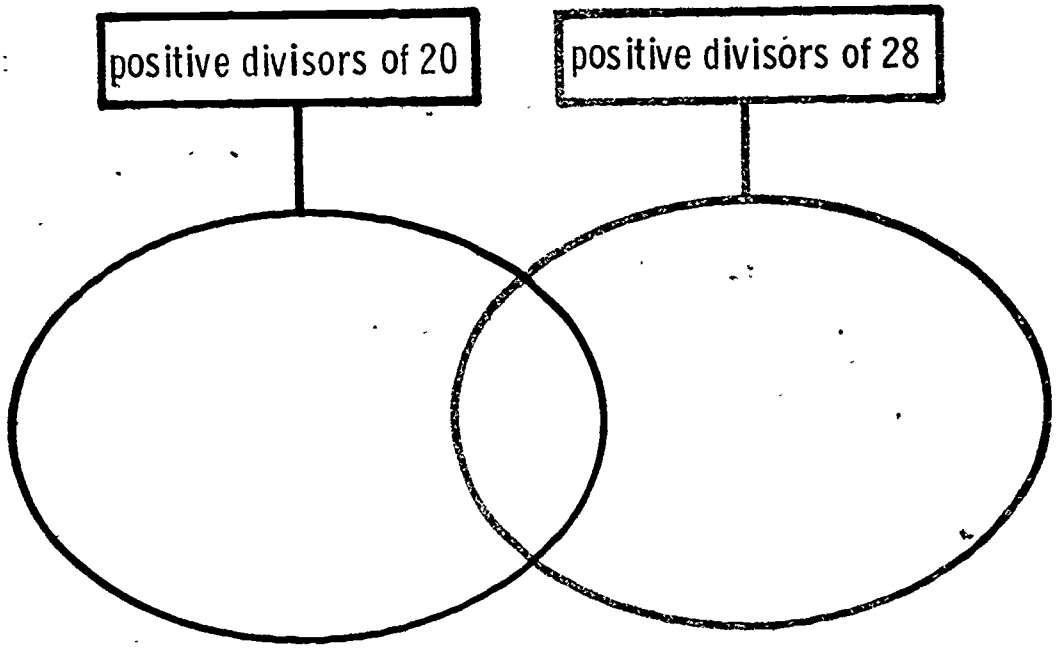
$Blip =_3 Blop$

Blip is _____. Blop is _____.

Name _____

N 44 *

Put all the positive divisors of 20 and of 28 in this string picture.



Complete each calculation.

20 ⊓ 28 = _____

10 ⊓ 28 = _____

35 ⊓ 28 = _____

Name _____ N 45 **

Zim is a secret whole number.

First clue

ZIM ⊔ 24 = 72

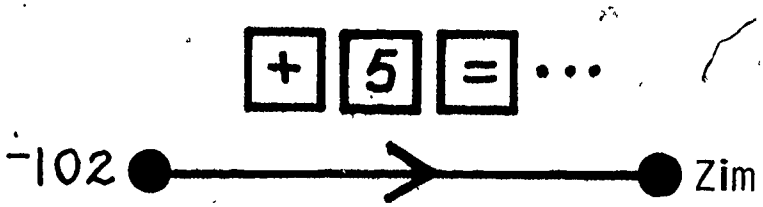
Zim could be _____, _____, _____, or _____.

Second clue

ZIM ⊓ 30 = 6

Zim could be _____, _____, or _____.

Third clue



Zim is _____.

Name _____

N 46 ***

Pom is a secret whole number.

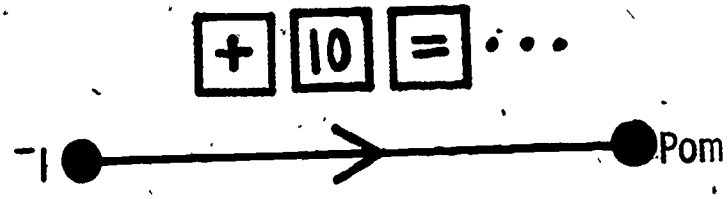
First clue

POM ⊓ 28 = 7

Find a pattern for the numbers that Pom could be.

Pom could be ____, ____, ____, ____, ____, ____, ____, ____, ____, ____, ____, and so on.

Second clue



Find a pattern for the numbers that Pom could be.

Pom could be ____, ____, ____, ____, ____, ____, and so on.

Third clue

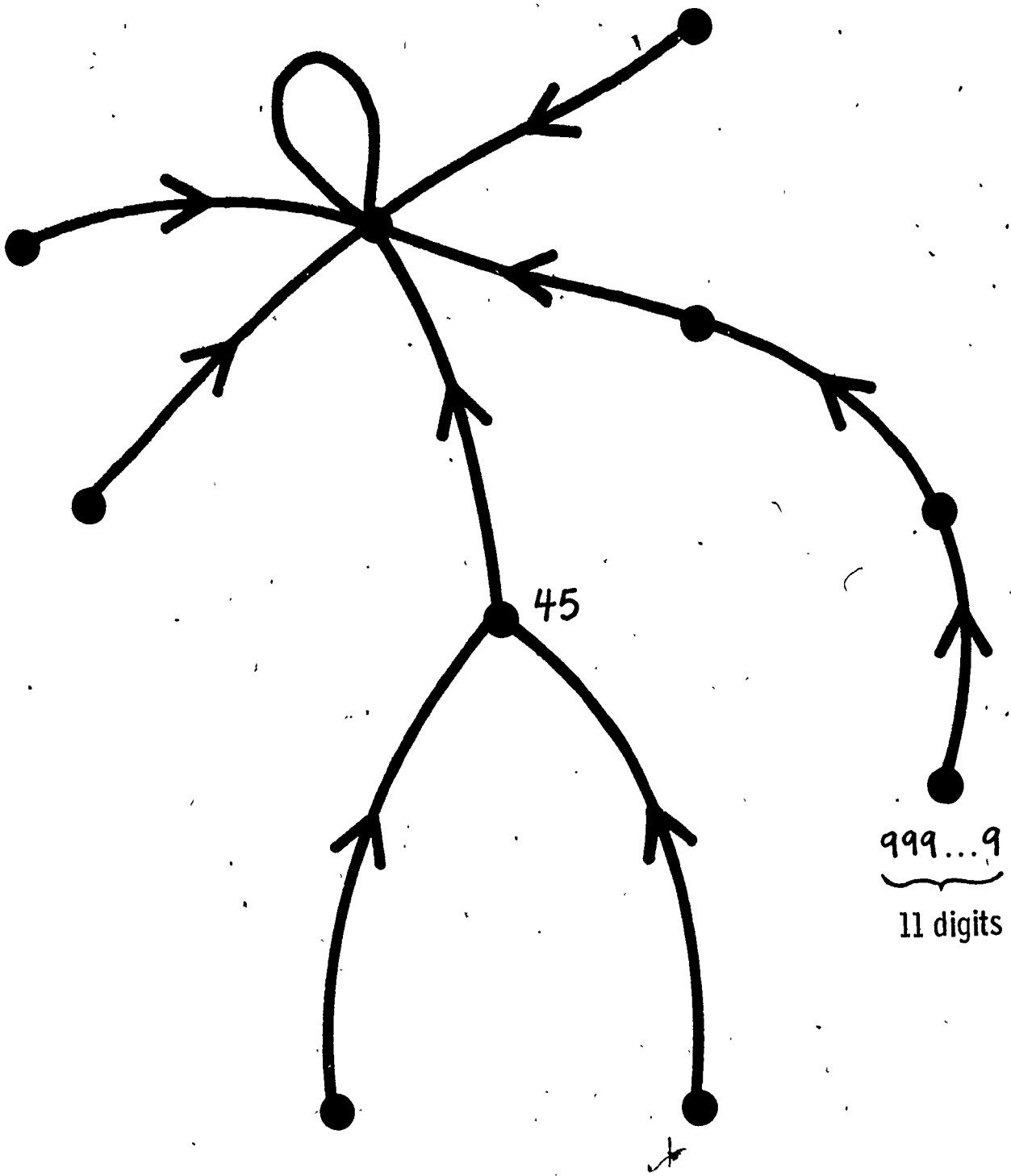
In this list, Pom is the largest number smaller than 1000.

Pom is _____.

Name _____

N 47 *

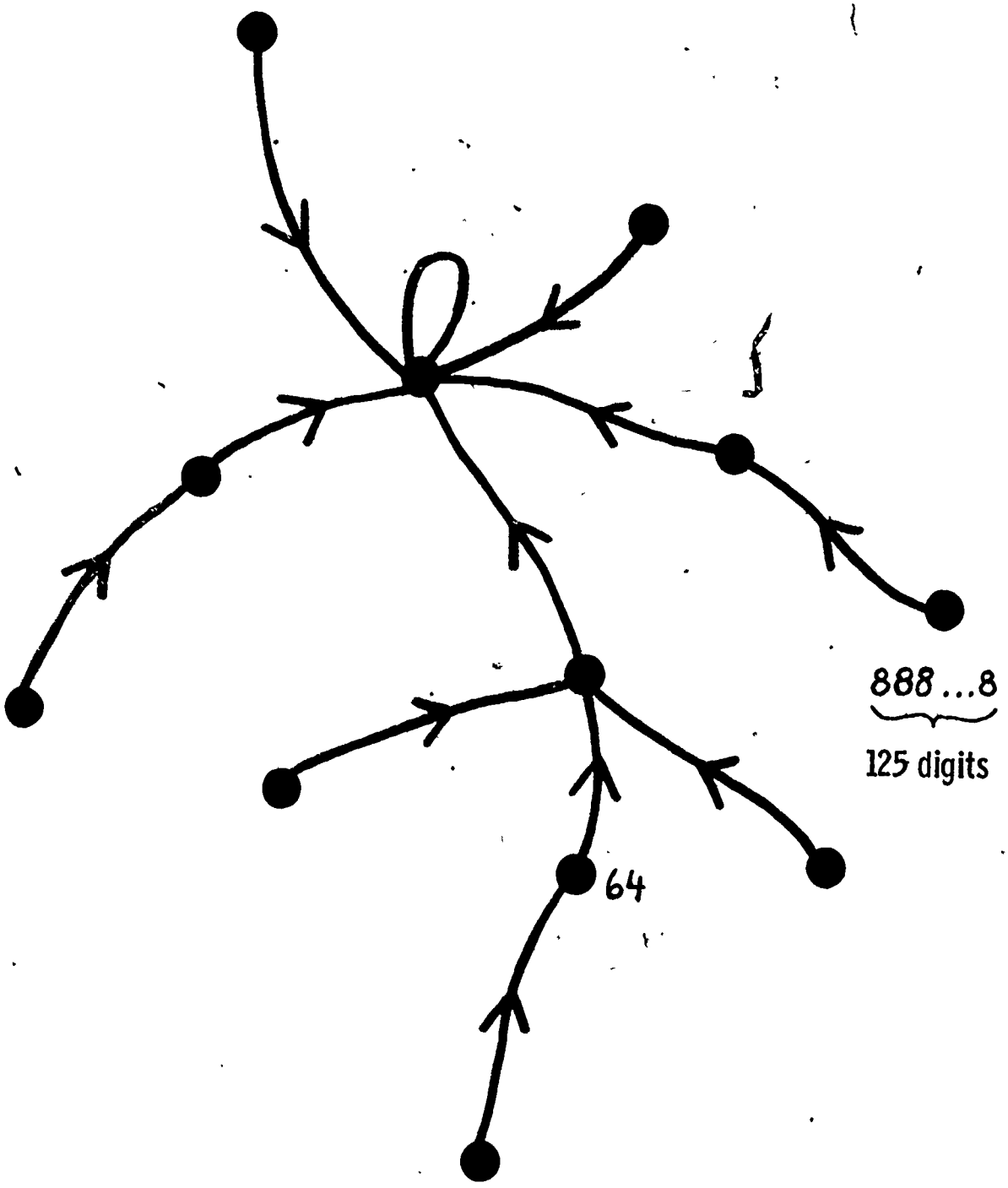
Label the dots. Many solutions are possible.



Name _____

N 48 **

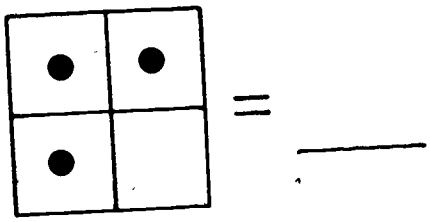
Label the dots. Many solutions are possible.

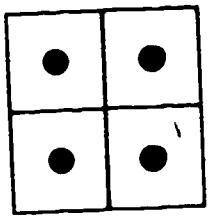


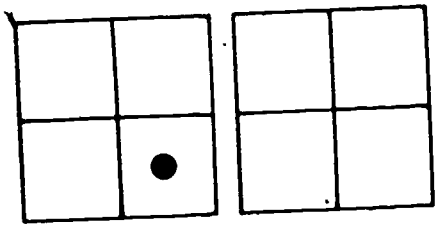
Name _____

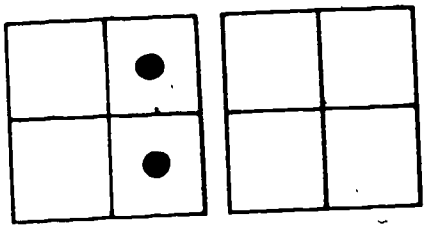
N 49 *

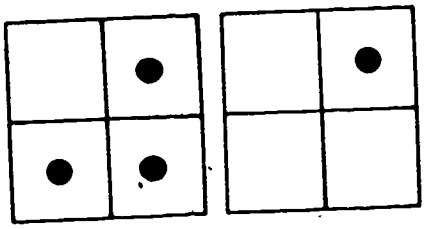
. On each Minicomputer, add one regular checker to get a multiple of 4.

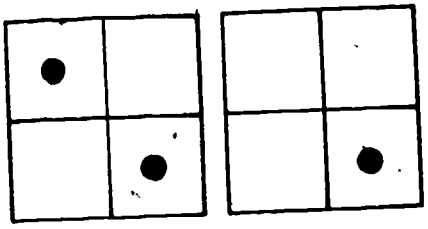
 = ____

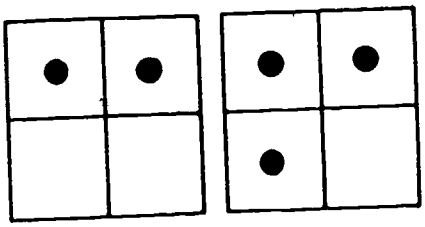
 = ____

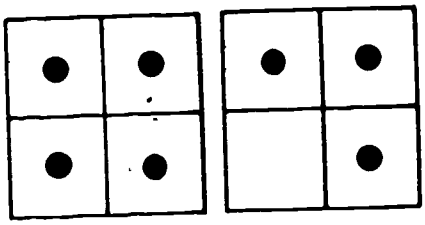
 = ____

 = ____

 = ____

 = ____

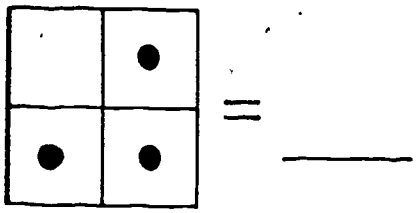
 = ____

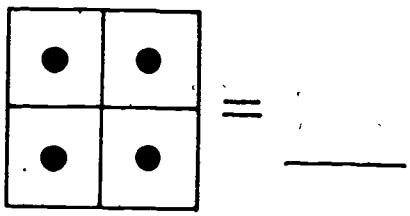
 = ____

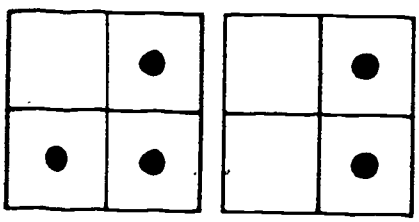
Name _____

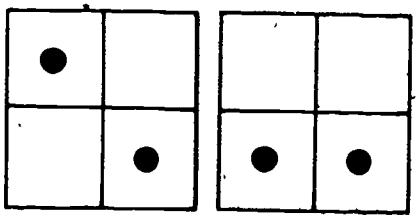
N 50 **

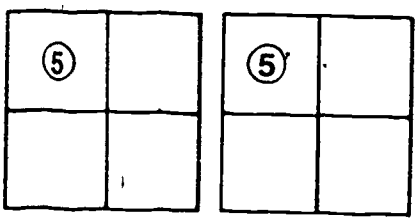
On each Minicomputer, add one regular checker and one negative checker to get a multiple of 4. Many solutions are possible.

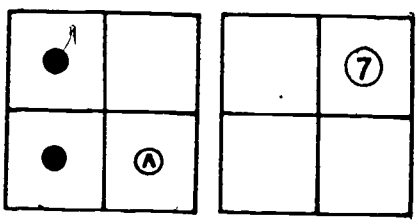
 = _____

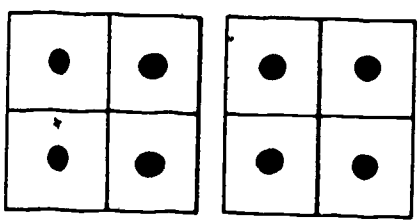
 = _____

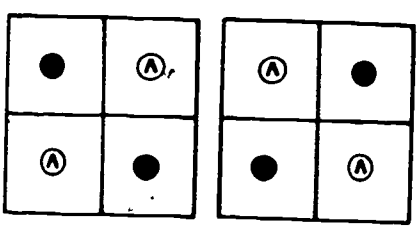
 = _____

 = _____

 = _____

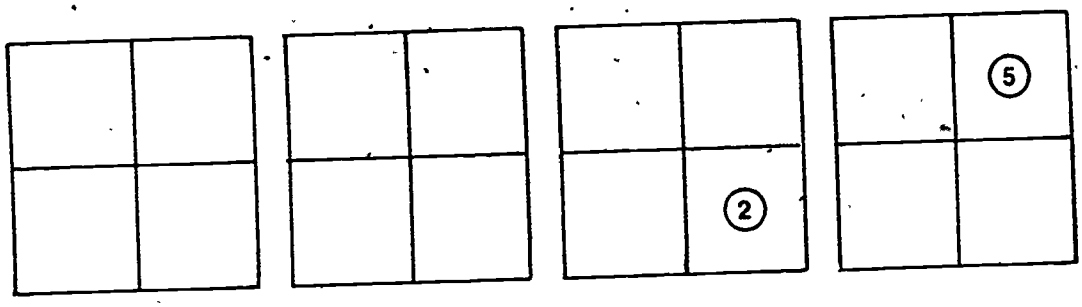
 = _____

 = _____

 = _____

Name _____

N 51 ***



Glip is a multiple of 3 and can be shown on the Minicomputer by moving exactly one of these checkers to another square.

List all the numbers that Glip could be.

Name _____

N 52 *

Zot is a secret number.

First clue

Zot is an even number and Zot's name can be completed by putting exactly one of the digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9 in the box.

ZOT = 96,73□

Zot could be _____, _____, _____, _____, or _____.

Second clue

Zot is divisible by 3.

Zot could be _____ or _____.

Third clue

Zot is not divisible by 4.

Zot is _____.

Name _____

N 53 **

Write a "T" for each true number story. Four true number stories are located for you.

Is Divisible By	2	3	4	5	6	8	9	10
5,560	T		T	T				T
320,787								
82,386								
11,881								
1,080								
118,852								
12,115								
21,060								
102,246								
10,072								
394,581								

Name _____

N 54 ***

FLOP = 56,08□

Flop's name can be completed by choosing at random exactly one of the digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9 to put in the box.

What is the probability that:

Flop is divisible by 2? _____

Flop is divisible by 3? _____

Flop is divisible by 4? _____

Flop is divisible by 5? _____

Flop is divisible by 6? _____

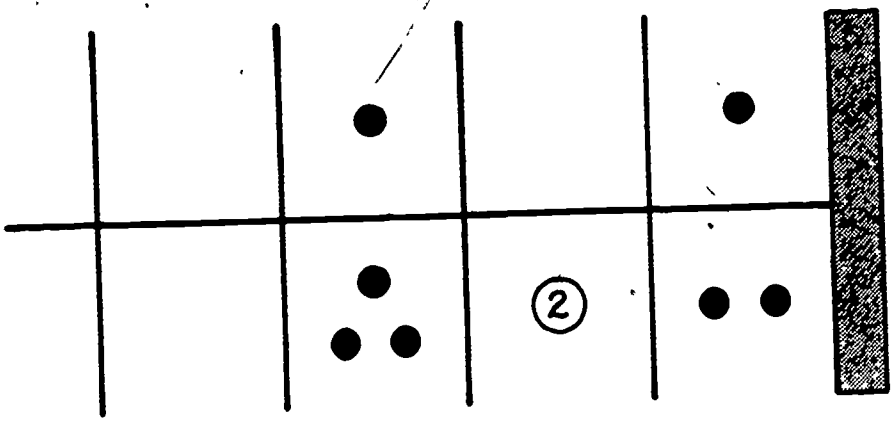
Flop is divisible by 8? _____

Flop is divisible by 9? _____

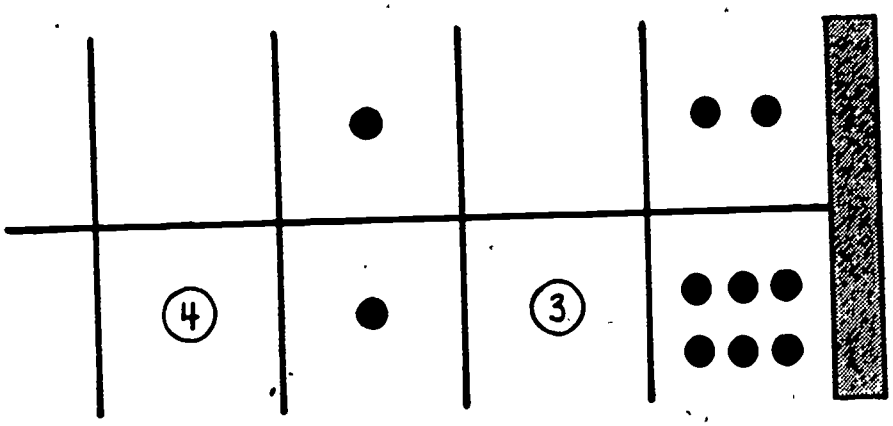
Name _____

N 55 *

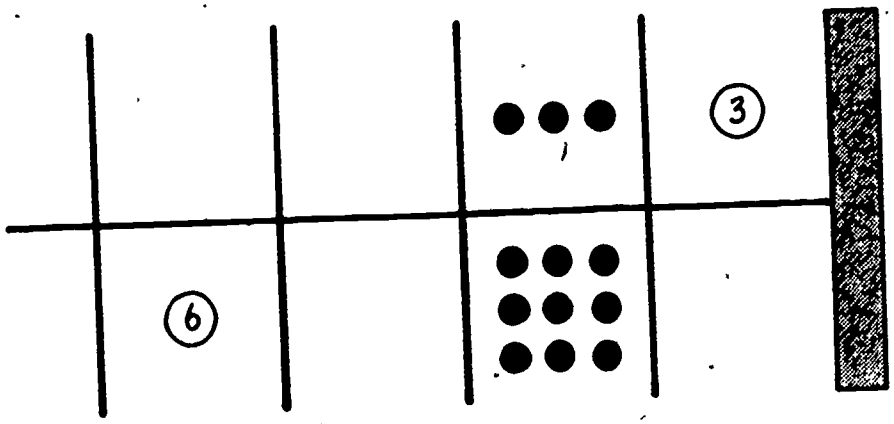
Decode these numbers on Nabu's 7-abacus.



= _____



= _____

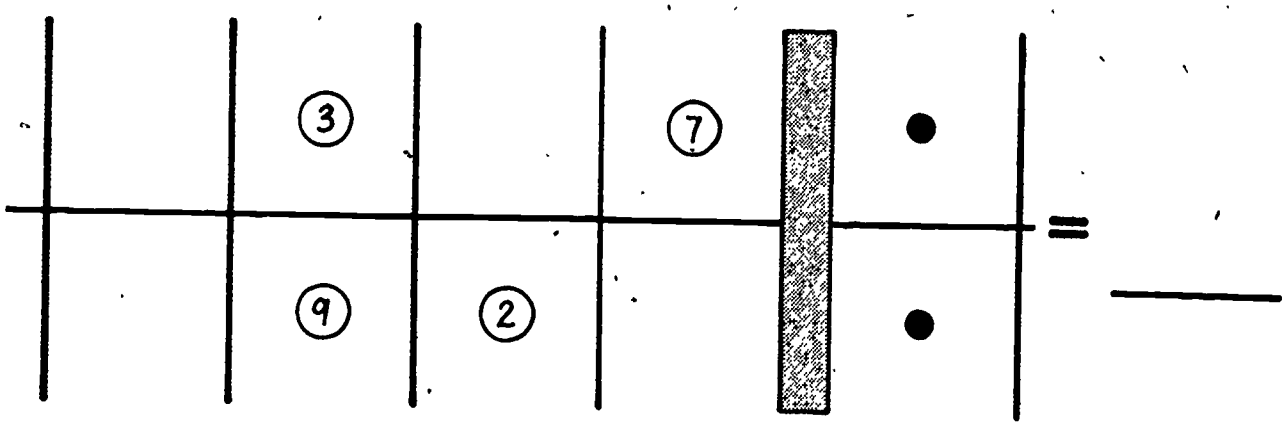


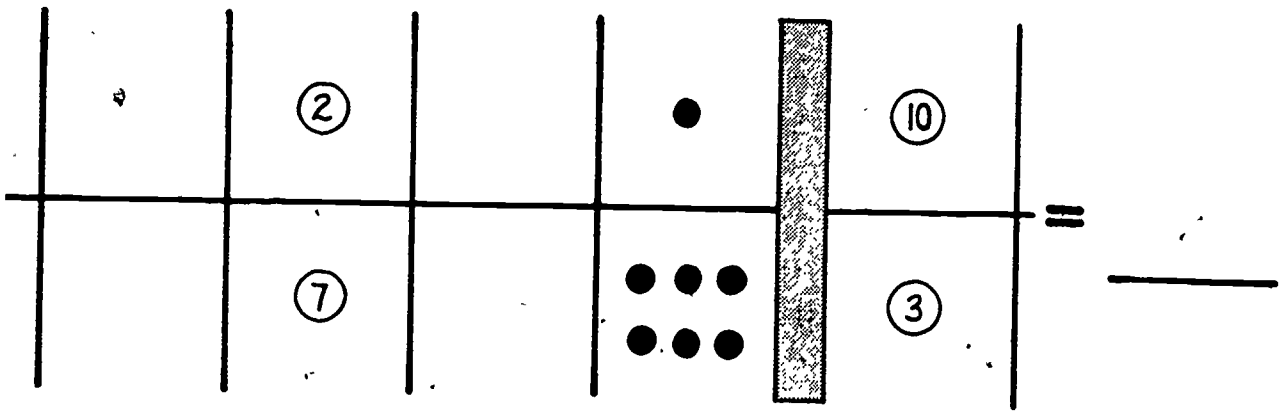
= _____

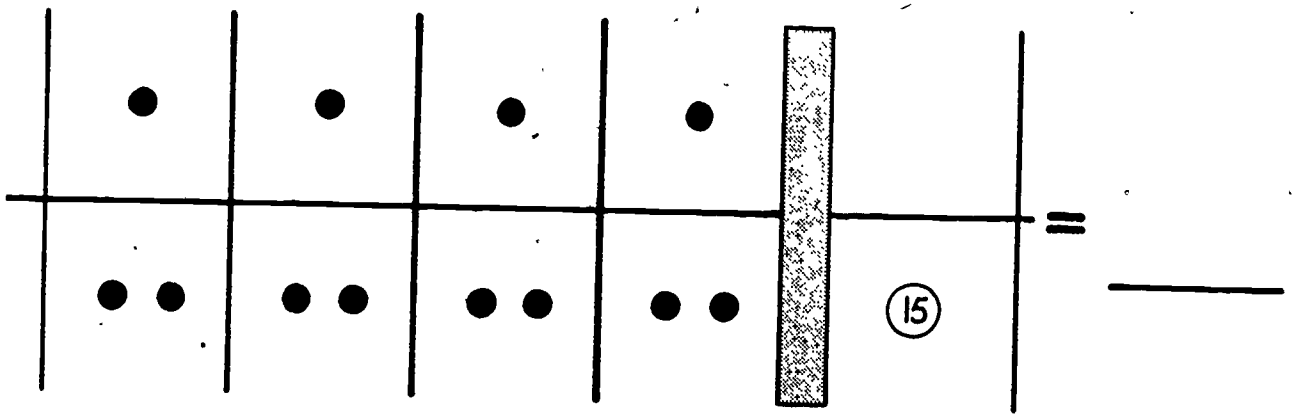
Name _____

N 56 **

Decode these numbers on Nabu's 7-abacus.



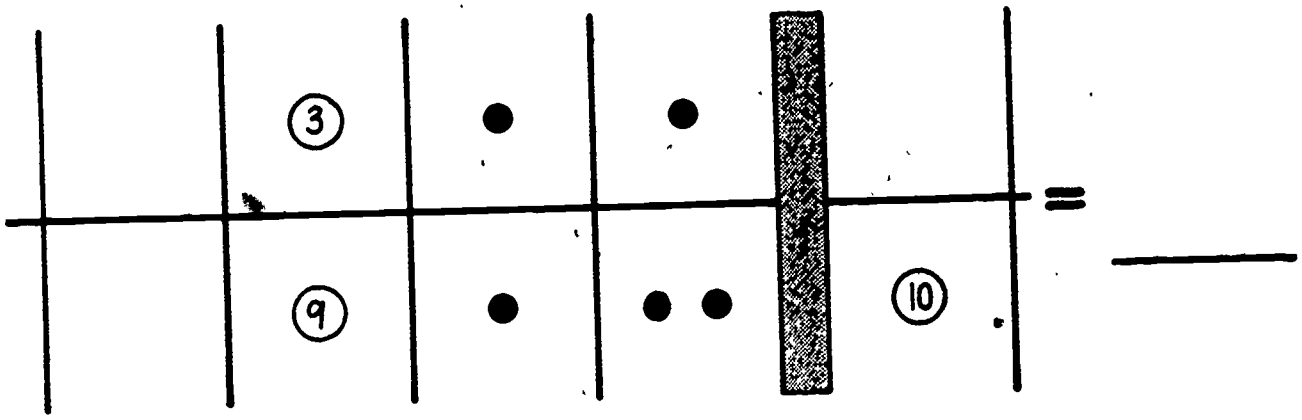


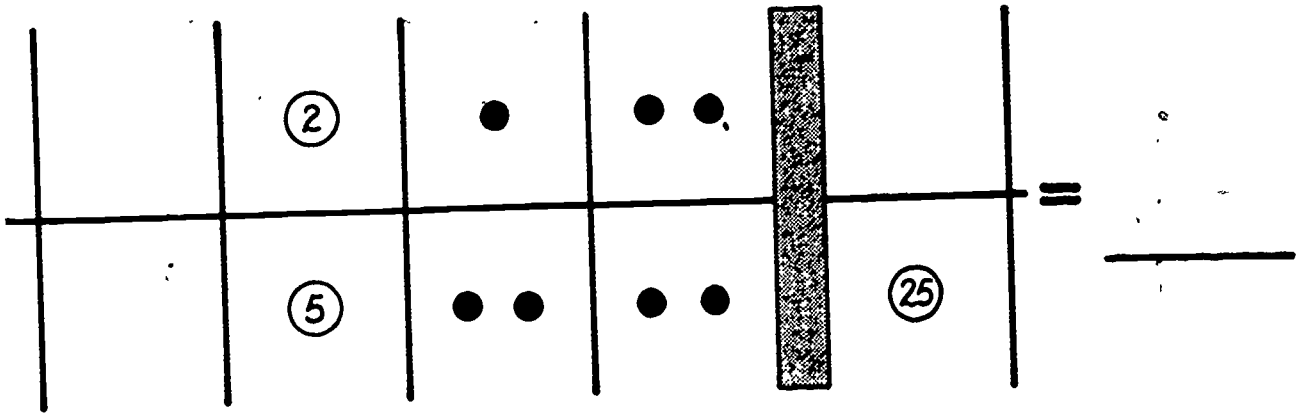


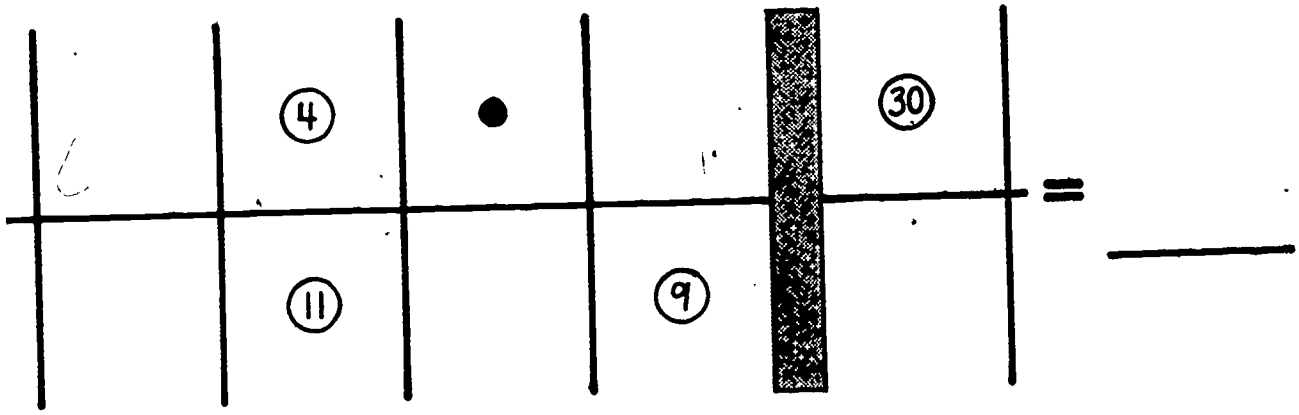
Name _____

N 57 *

Decode these numbers on Nabu's 7-abacus.



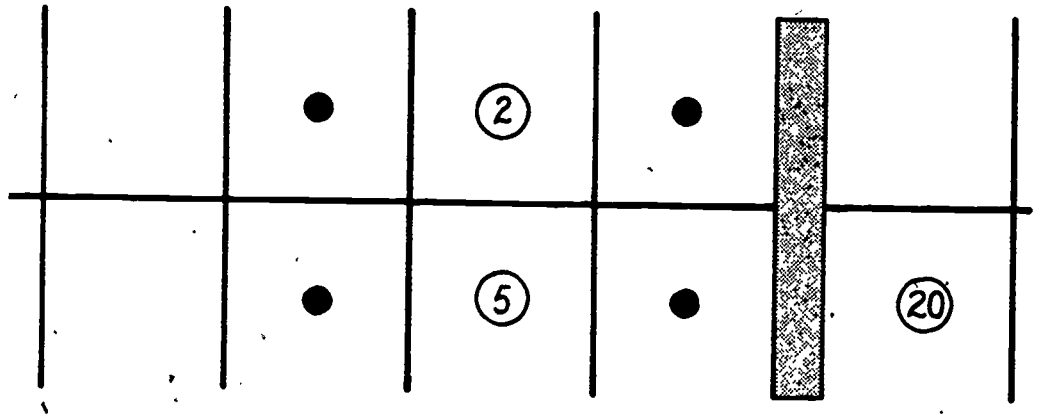




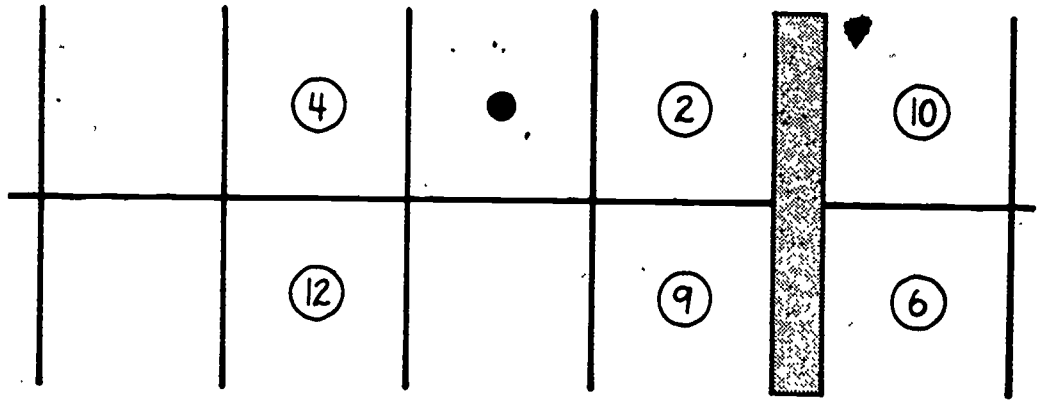
Name _____

N 58 **

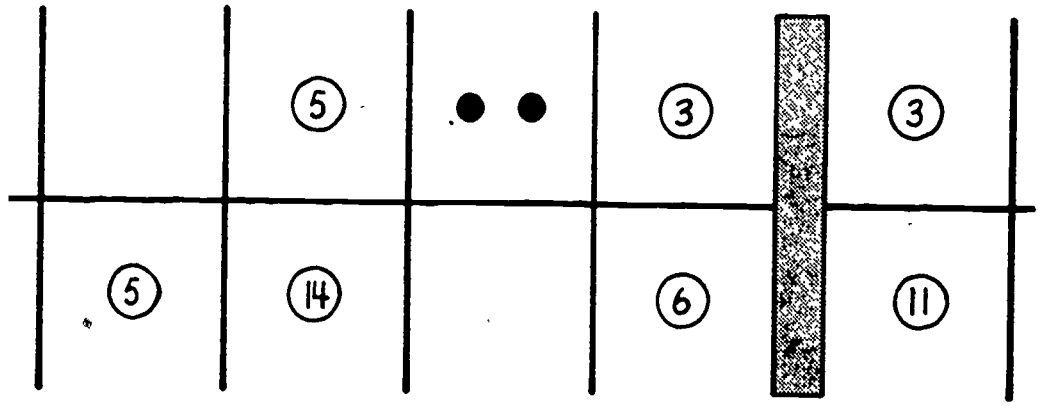
Decode these numbers on Nabu's 7-abacus.



= _____



= _____



= _____

Name _____

N 59 **

Complete each problem.

$$\begin{array}{r|l} \square\square.\square\square & R = 0.\square\square \\ 6\overline{)16\square.4\square} & \\ -\square\square\square.00 & \square 0 \\ \hline \square 3.\square\square & \\ -\square\square.00 & \square \\ \hline \square.\square\square & \\ -\square.\square 0 & 0.\square 0 \\ \hline 0.2\square & \\ -0.24 & 0.\square\square \\ \hline 0.01 & \square\square.24 \end{array}$$

$$67\overline{)1205.28}$$

Name _____

N 60 ***

Complete each problem.

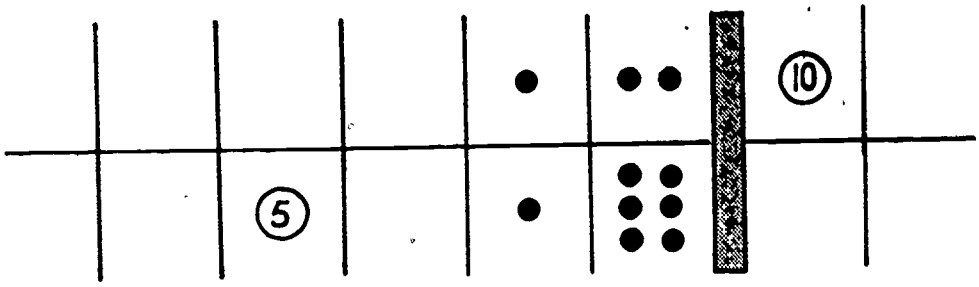
$$\begin{array}{r} \square\square.\square\square \quad R=\square.\square\square \\ \square\square\overline{)\square\square\square.\square\square} \\ -450.00 \quad 30 \\ \hline 75.6\square \\ -\square\square.00 \quad \square \\ \hline 0.\square\square \\ -0.\square 0 \quad 0.\square\square \\ \hline 0.02 \quad \square\square.\square\square \end{array}$$

$$125\overline{)3576.06}$$

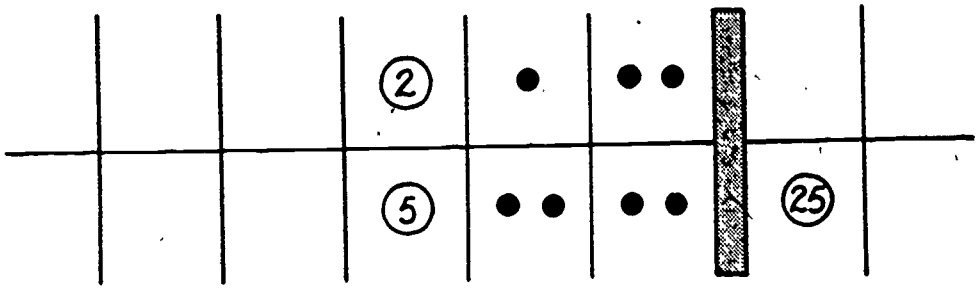
Name _____

N 61 *

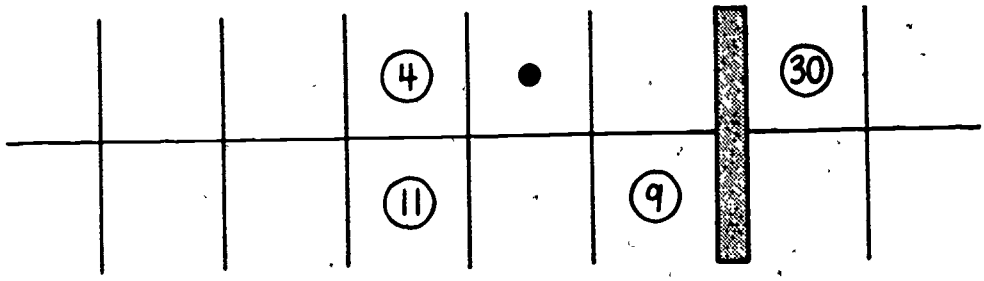
Decode these numbers on Nabu's 7-abacus.



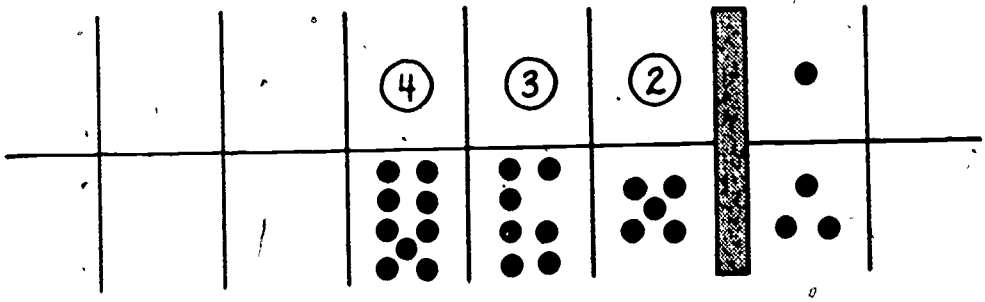
= _____



= _____



= _____



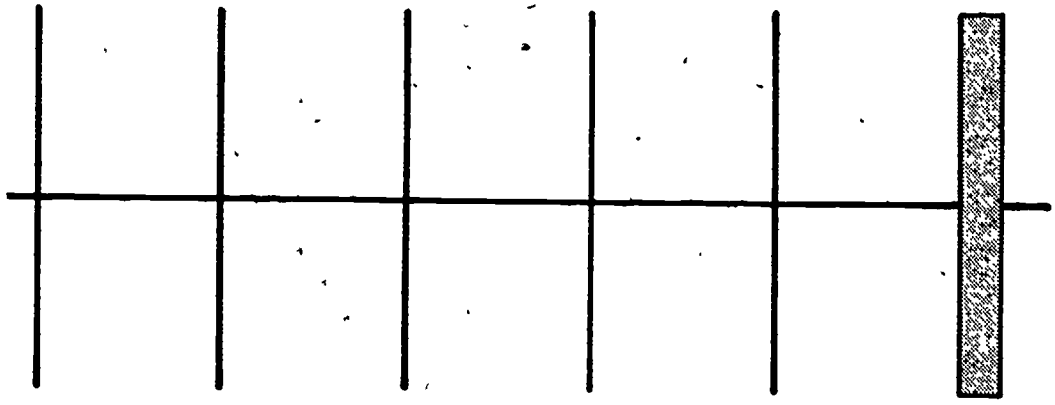
= _____

Name _____

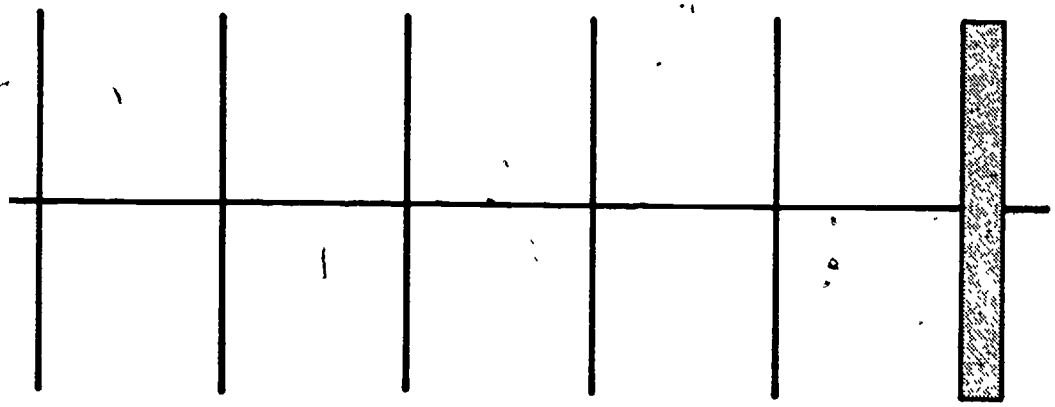
N 62 **

Write each number on Nabu's 7-abacus by putting as many checkers as you can in the upper squares.

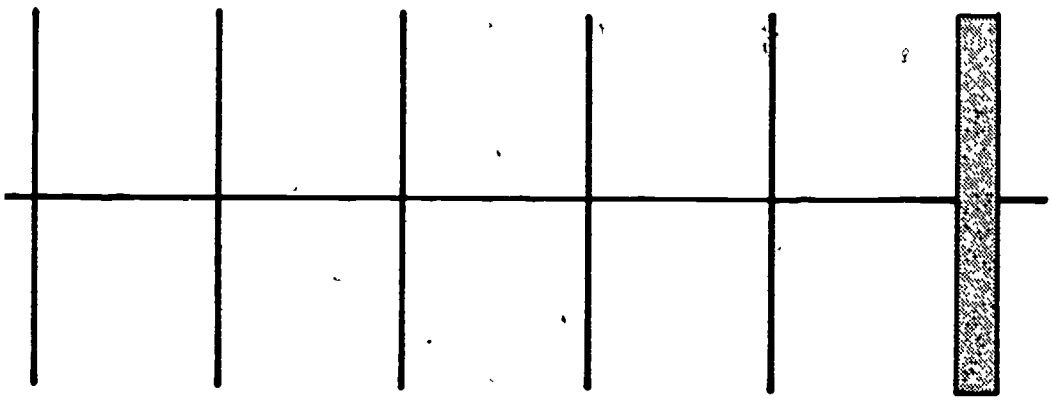
2,000 =



8,000 =

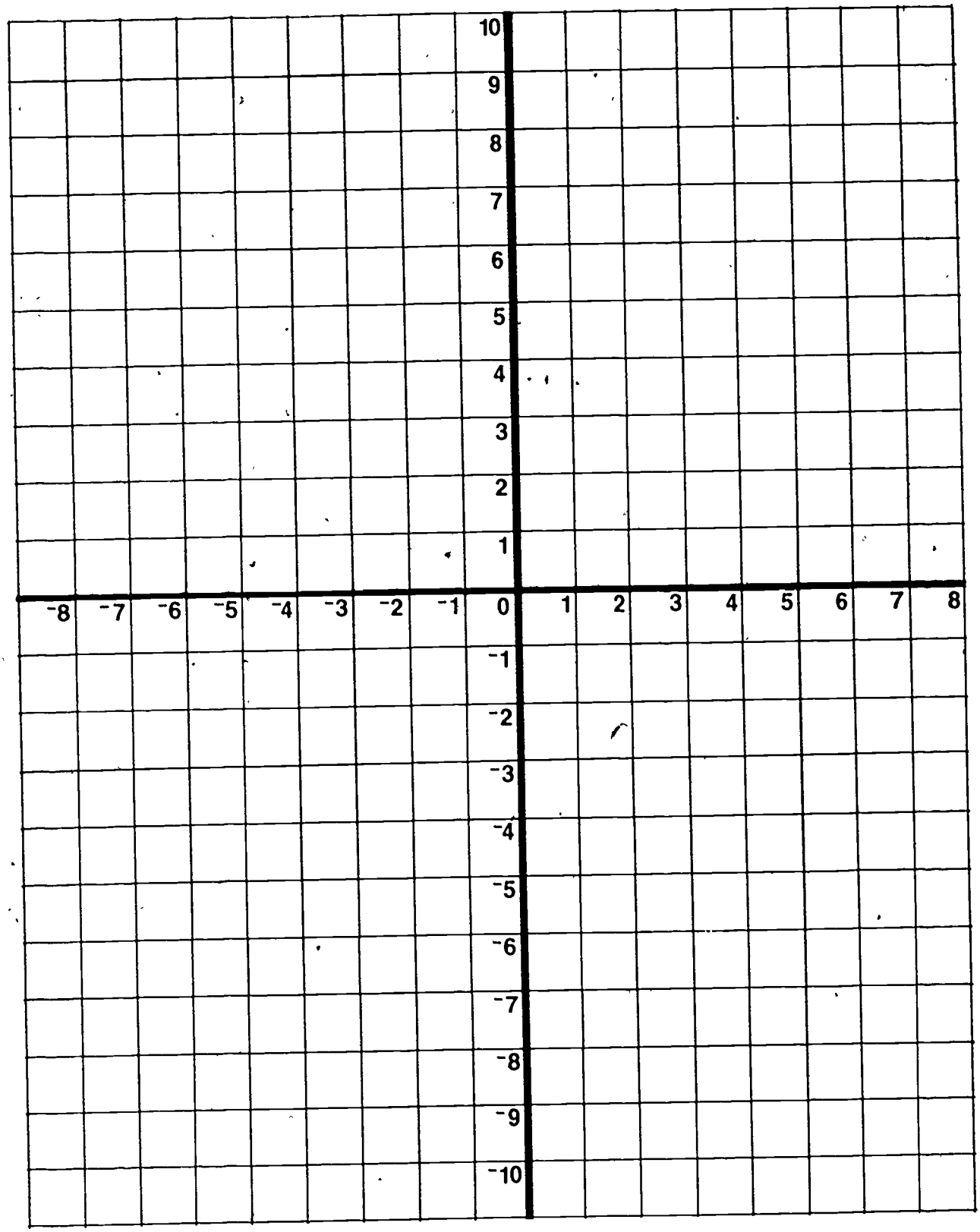


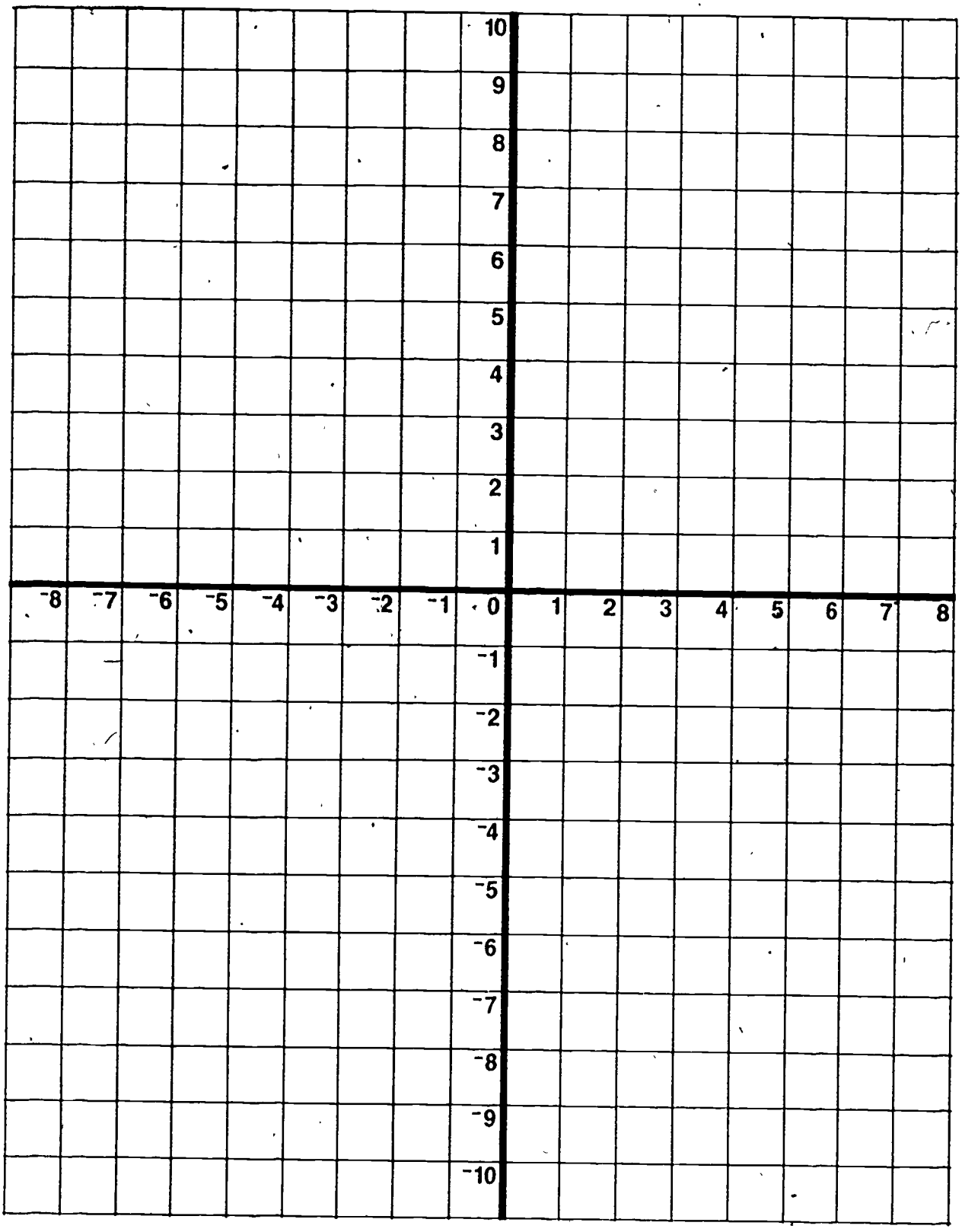
23,456 =



Name _____

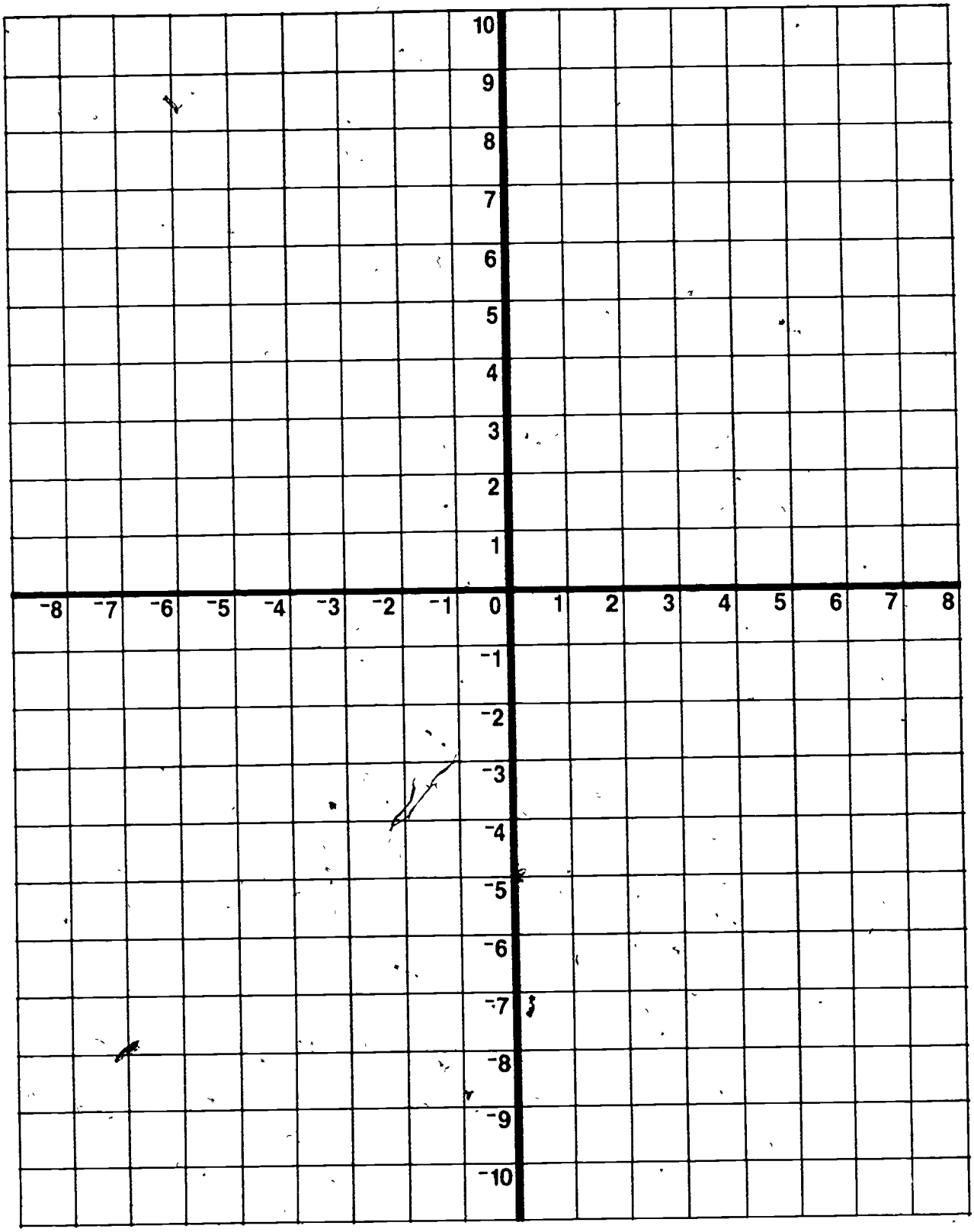
N 63

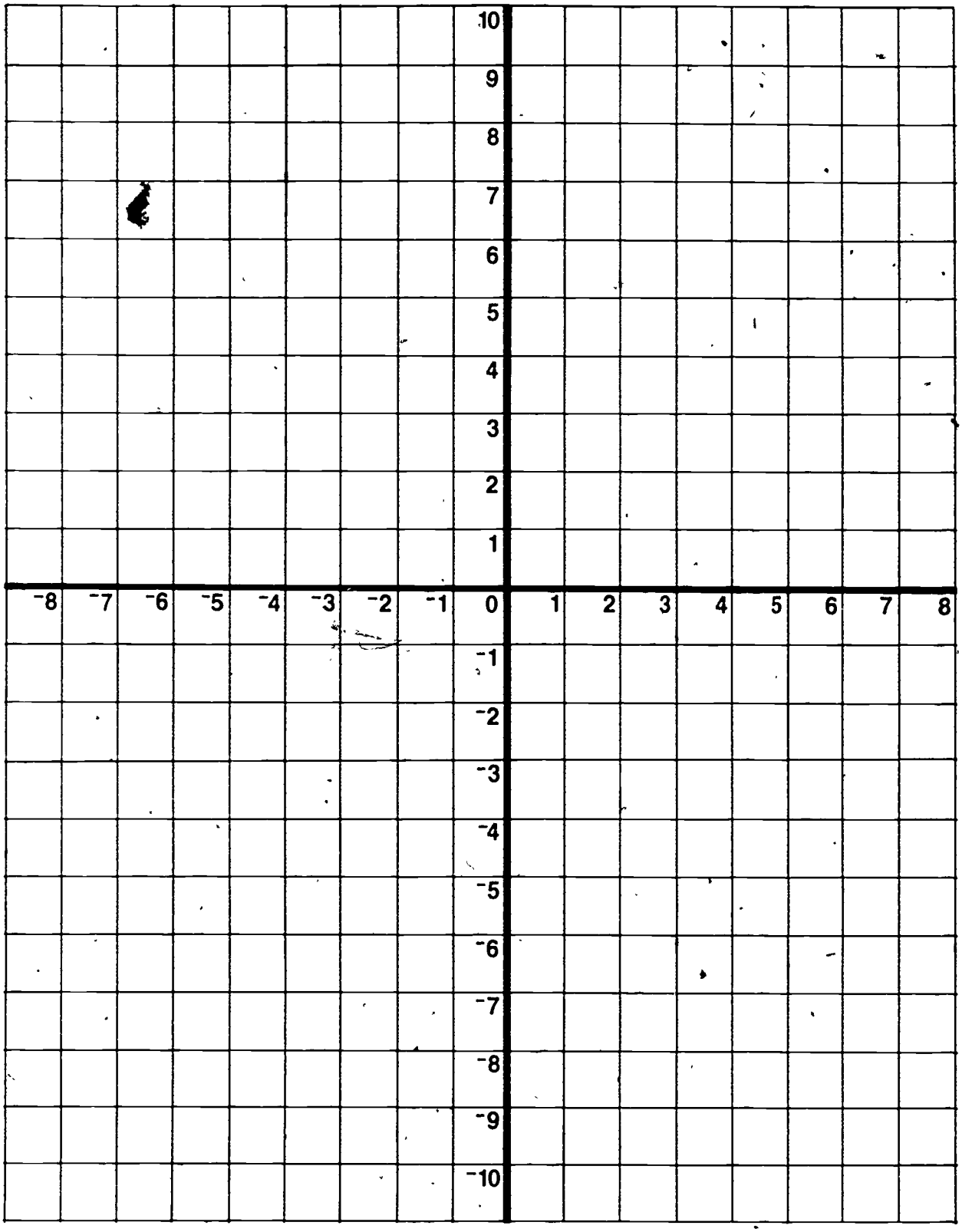



10
9
8
7
6
5
4
3
2
1
-8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10

Name _____

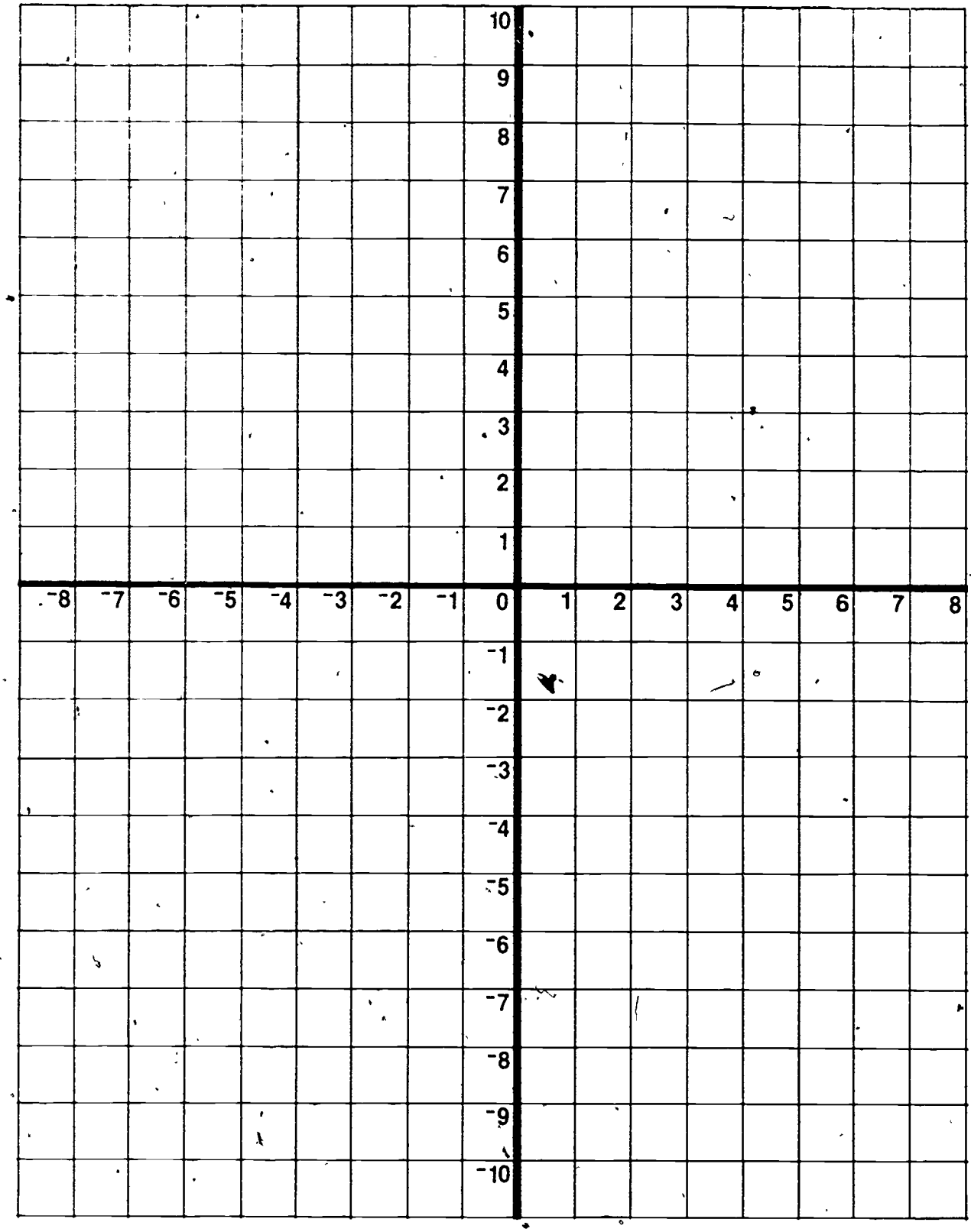
N 64

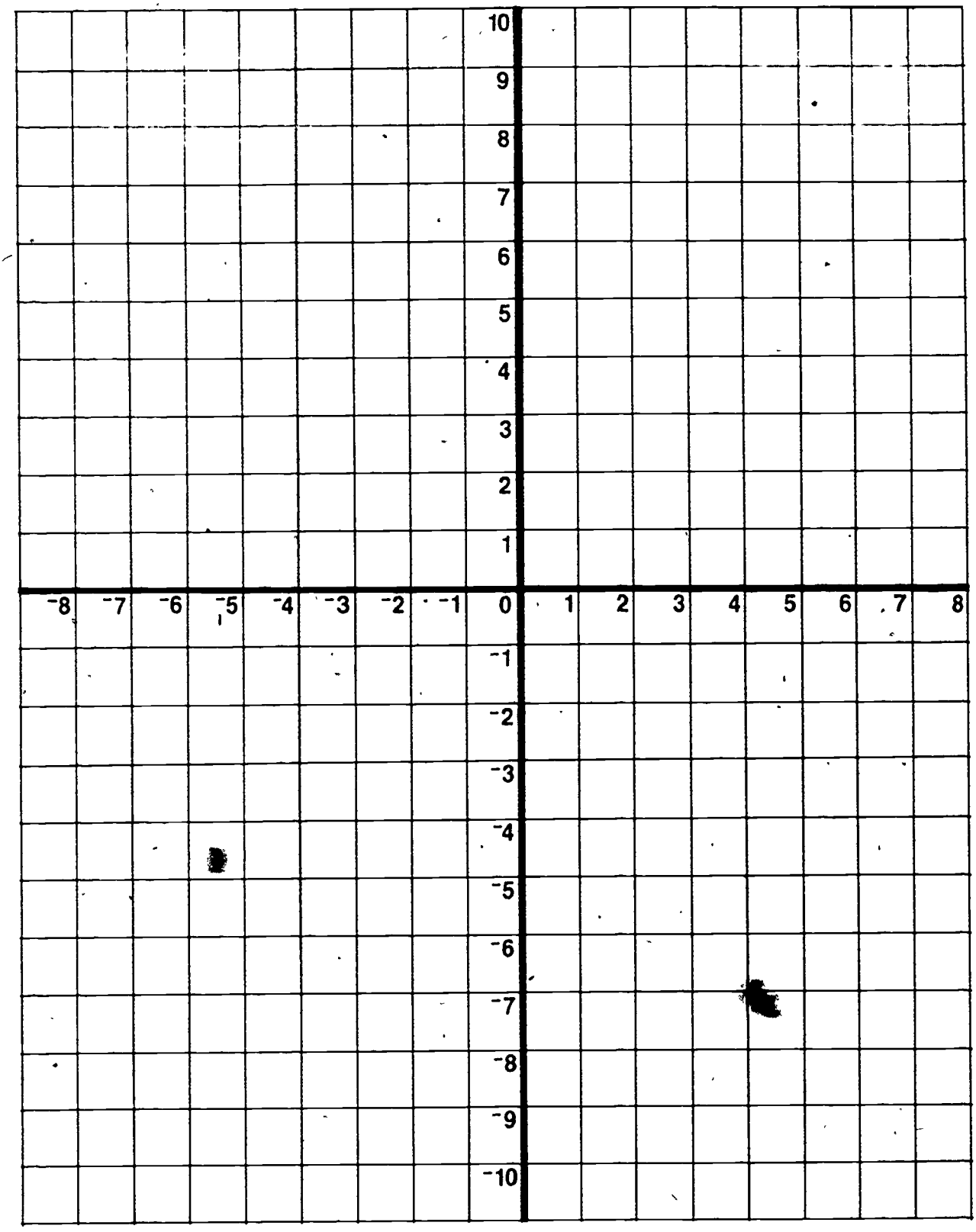



10
9
8
7
6
5
4
3
2
1
-8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10

Name _____

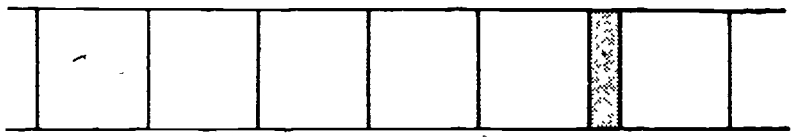
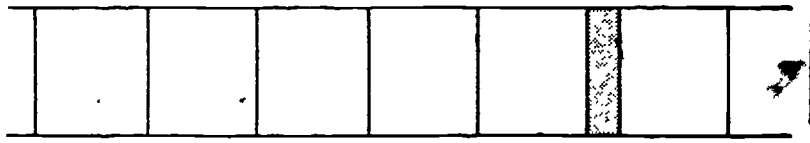
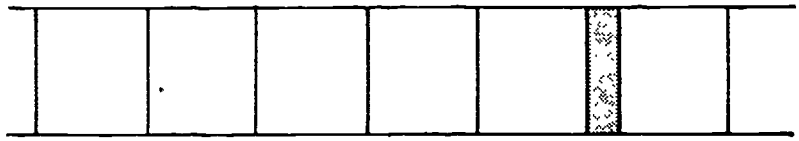
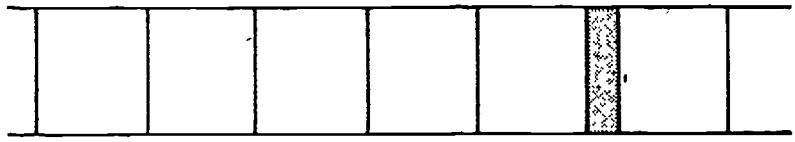
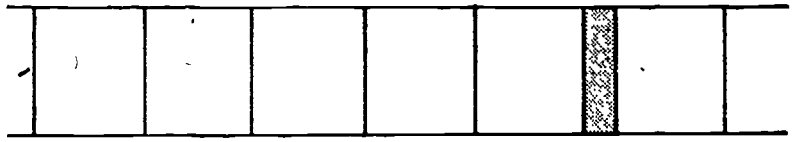
N 65




10
9
8
7
6
5
4
3
2
1
-8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10

Name _____

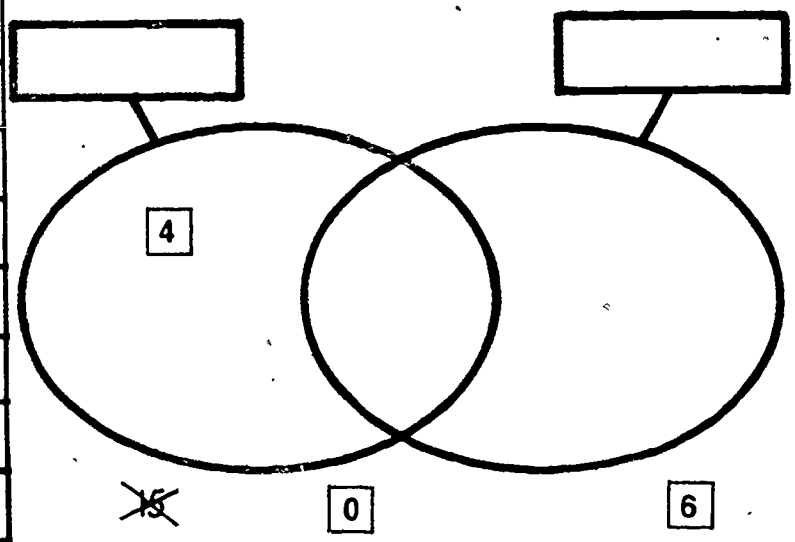
N 66

Decimal Writing		Base Five Writing
63		
210		
		1234
800		
		2023

Name _____ L 01 *

Use the clues in the picture to cross out labels the strings cannot have.
Then label the strings.

RED	BLUE
MULTIPLES OF 2	MULTIPLES OF 2
MULTIPLES OF 3	MULTIPLES OF 3
MULTIPLES OF 4	MULTIPLES OF 4
MULTIPLES OF 5	MULTIPLES OF 5
MULTIPLES OF 10	MULTIPLES OF 10
ODD NUMBERS	ODD NUMBERS
POSITIVE PRIME NUMBERS	POSITIVE PRIME NUMBERS
LARGER THAN 50	LARGER THAN 50
SMALLER THAN 50	SMALLER THAN 50
LARGER THAN $^{-}10$	LARGER THAN $^{-}10$
SMALLER THAN $^{-}10$	SMALLER THAN $^{-}10$
POSITIVE DIVISORS OF 12	POSITIVE DIVISORS OF 12
POSITIVE DIVISORS OF 18	POSITIVE DIVISORS OF 18
POSITIVE DIVISORS OF 20	POSITIVE DIVISORS OF 20
POSITIVE DIVISORS OF 24	POSITIVE DIVISORS OF 24
POSITIVE DIVISORS OF 27	POSITIVE DIVISORS OF 27

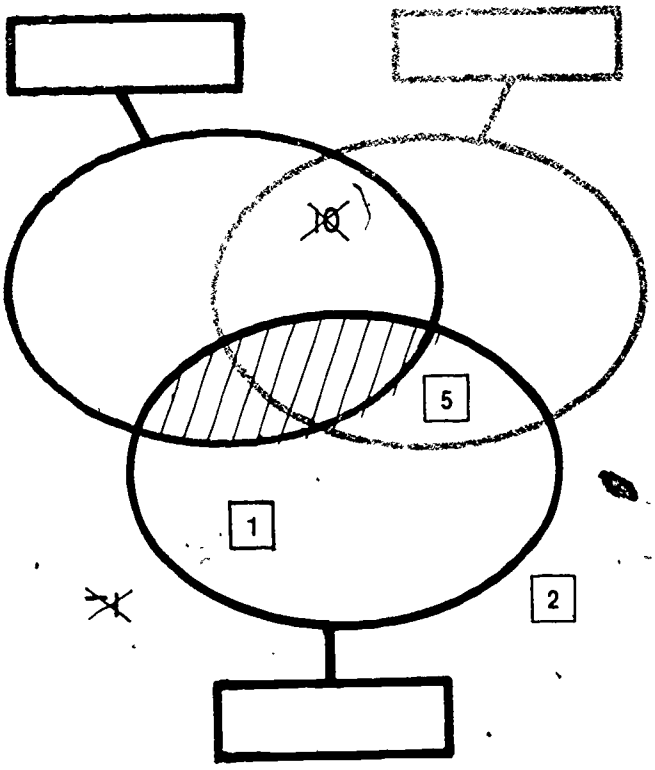


Name _____

L 02 **

Use the clues to cross out labels the strings cannot have. Then label the strings.

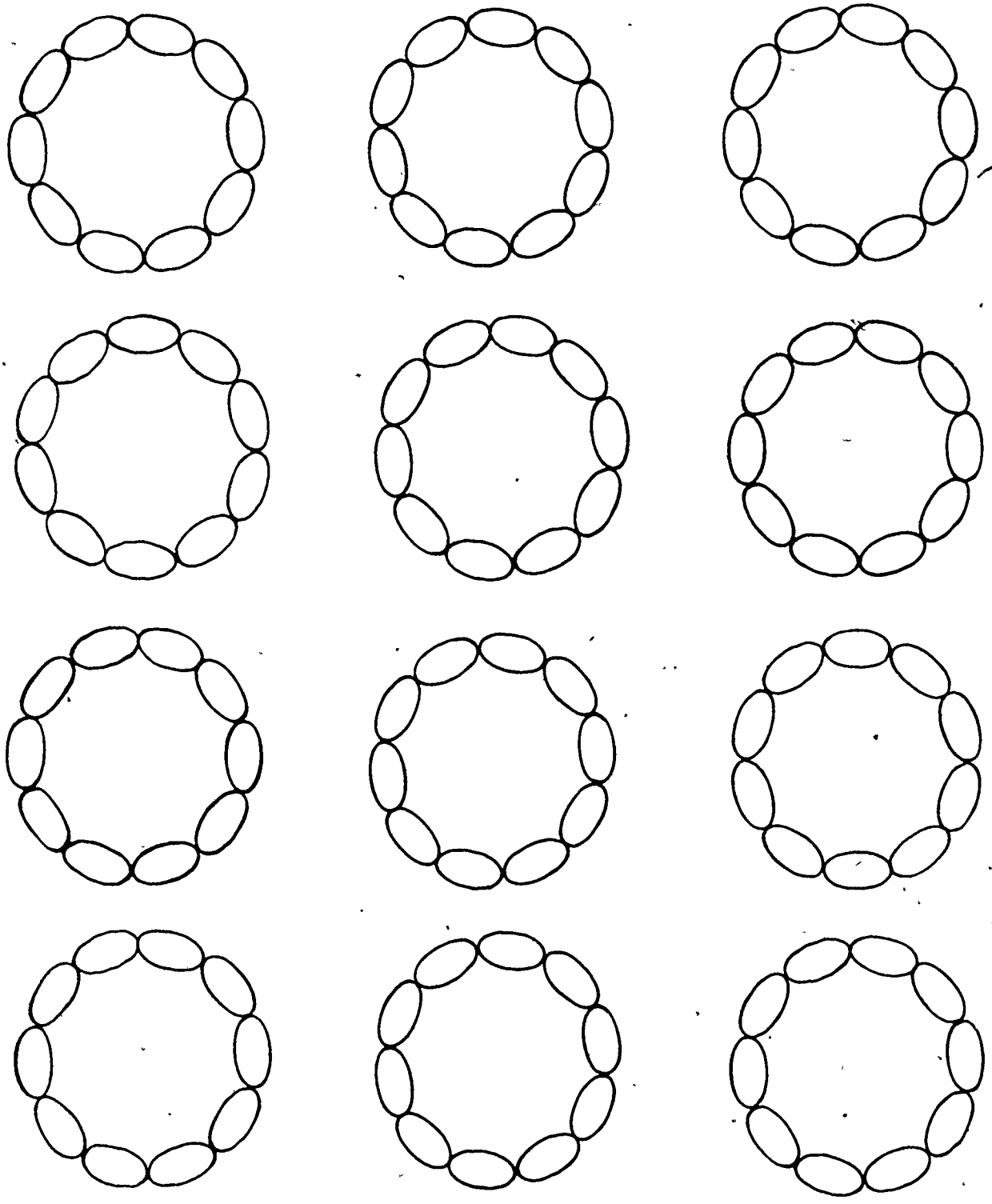
RED	BLUE	BLACK
MULTIPLES OF 2	MULTIPLES OF 2	MULTIPLES OF 2
MULTIPLES OF 3	MULTIPLES OF 3	MULTIPLES OF 3
MULTIPLES OF 4	MULTIPLES OF 4	MULTIPLES OF 4
MULTIPLES OF 5	MULTIPLES OF 5	MULTIPLES OF 5
MULTIPLES OF 10	MULTIPLES OF 10	MULTIPLES OF 10
ODD NUMBERS	ODD NUMBERS	ODD NUMBERS
POSITIVE PRIME NUMBERS	POSITIVE PRIME NUMBERS	POSITIVE PRIME NUMBERS
LARGER THAN 50	LARGER THAN 50	LARGER THAN 50
SMALLER THAN 50	SMALLER THAN 50	SMALLER THAN 50
LARGER THAN -10	LARGER THAN -10	LARGER THAN -10
SMALLER THAN -10	SMALLER THAN -10	SMALLER THAN -10
POSITIVE DIVISORS OF 12	POSITIVE DIVISORS OF 12	POSITIVE DIVISORS OF 12
POSITIVE DIVISORS OF 18	POSITIVE DIVISORS OF 18	POSITIVE DIVISORS OF 18
POSITIVE DIVISORS OF 20	POSITIVE DIVISORS OF 20	POSITIVE DIVISORS OF 20
POSITIVE DIVISORS OF 24	POSITIVE DIVISORS OF 24	POSITIVE DIVISORS OF 24
POSITIVE DIVISORS OF 27	POSITIVE DIVISORS OF 27	POSITIVE DIVISORS OF 27



Name _____

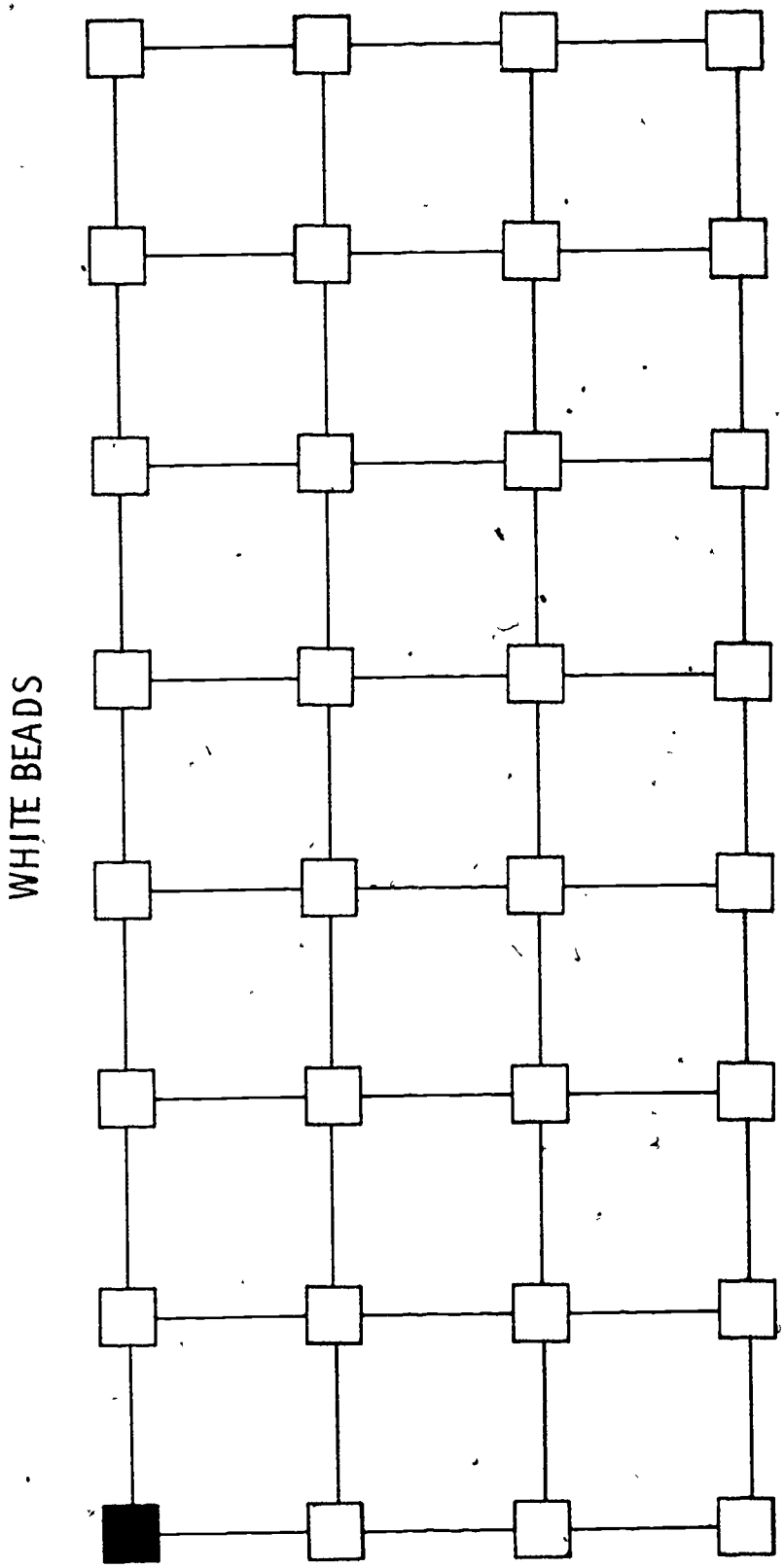
L 03

Show all of the different necklaces with seven white and three red beads.
(You will not need to color all of the necklaces here.)



Name _____

L 04

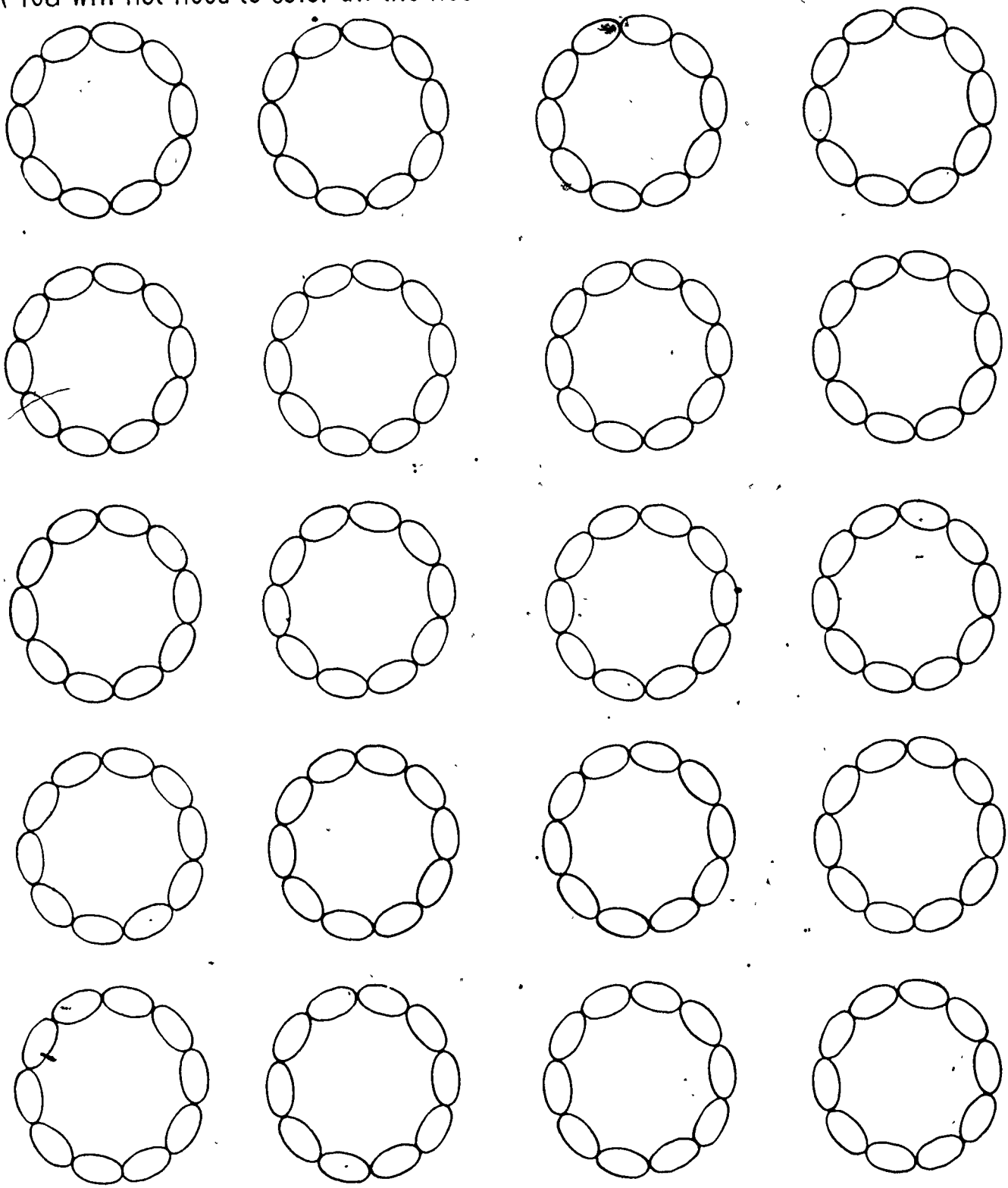


Name _____

L 05

Show all of the different necklaces with six white and four red beads.

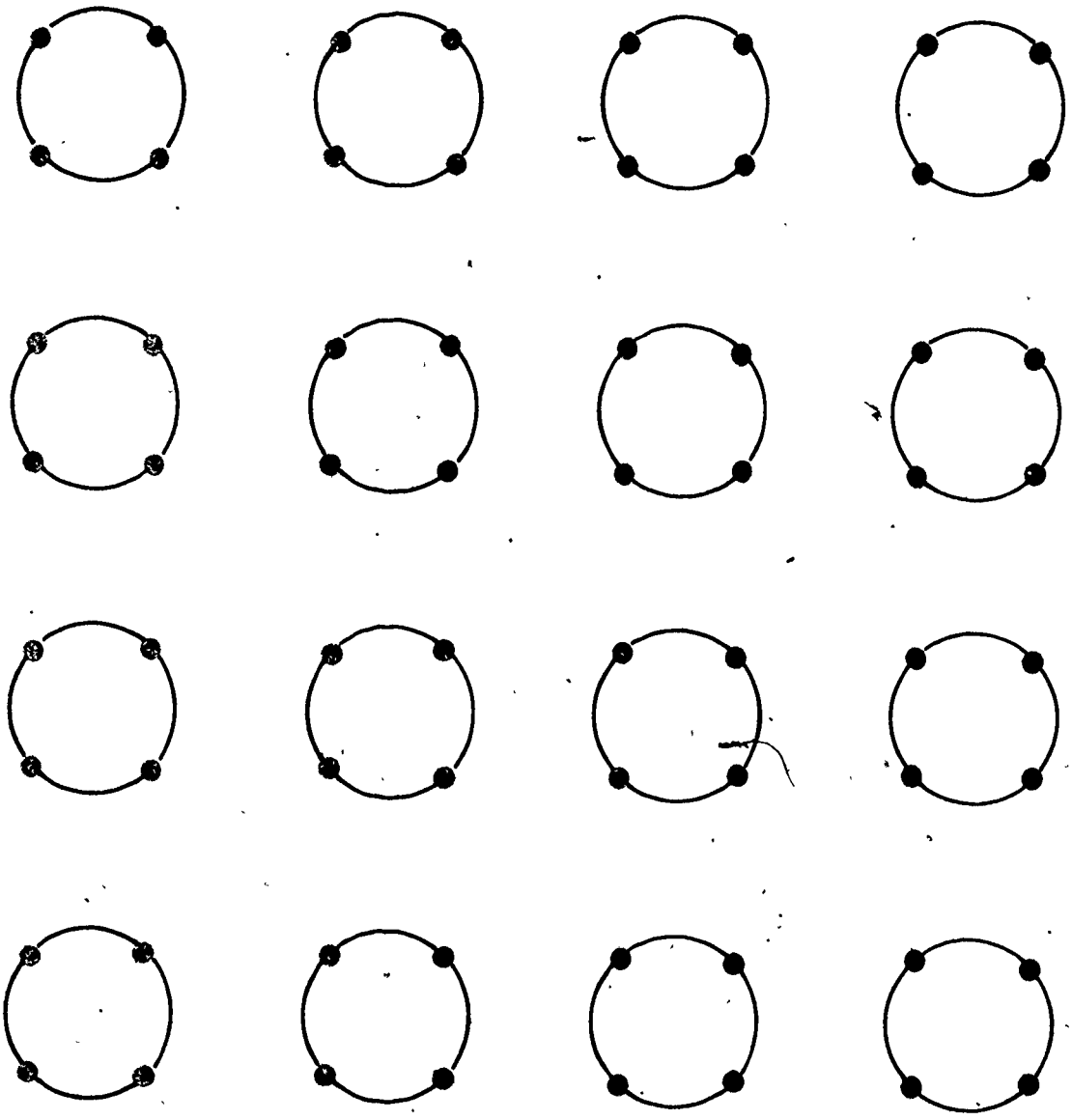
(You will not need to color all the necklaces here.)



Name _____

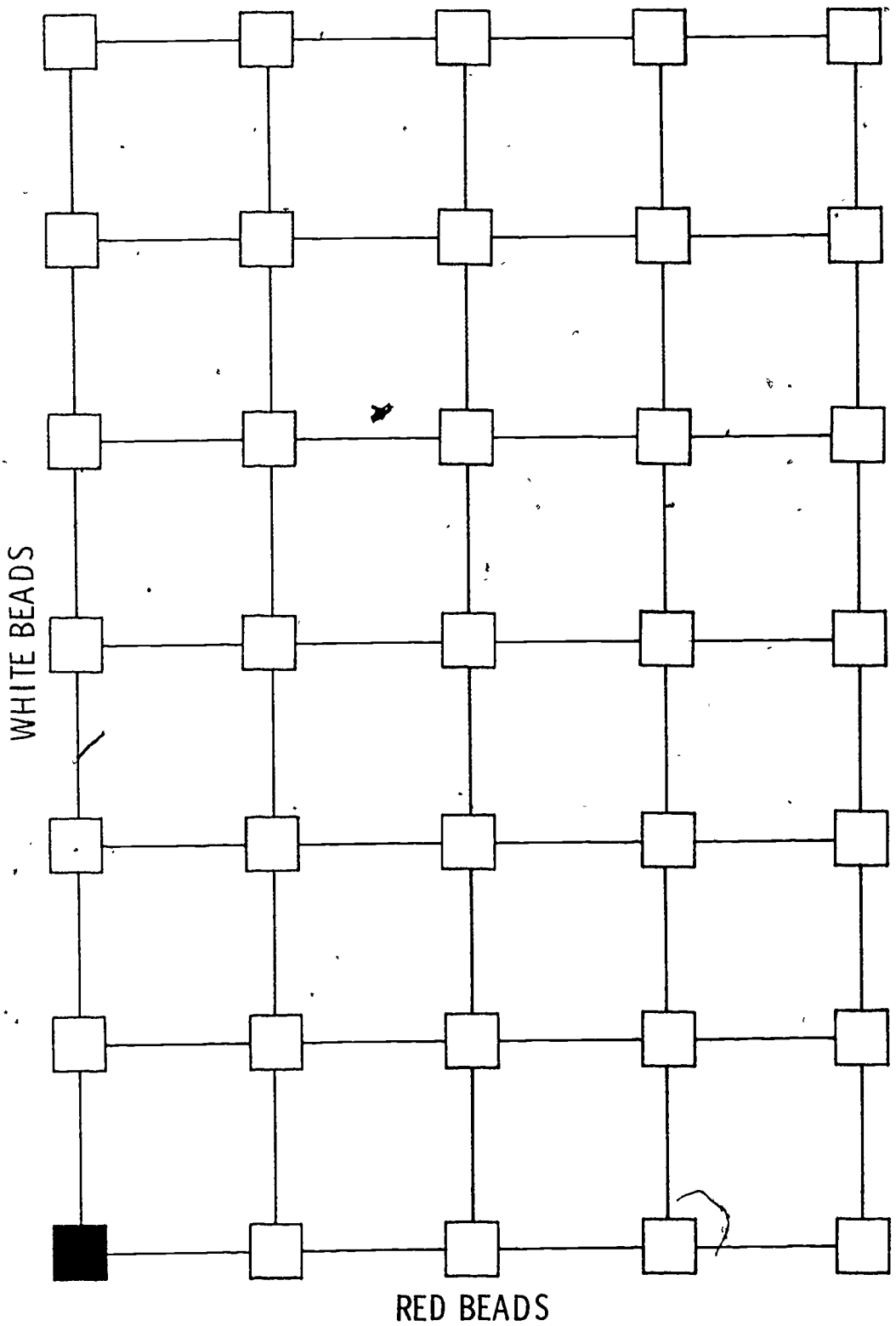
L 06

Record the number of white beads between the four red beads in each arrangement of Theophilus' necklace.



Name _____

L 07



Name _____

L 08

Complete the tables.

T_D	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

$T_{=e}$	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

Name _____

L 09

Complete the tables.

−3	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

×3	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

Name _____

L 10

Complete the tables.

□	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

T=4	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

Name _____

L 11 *

Each table is for one of these.

$+$	$+_3$	$+_{10}$
$-$	$-_3$	$-_{10}$
$\times$	$\times_3$	$\times_{10}$
$\uparrow$	$\sqcap$	$T_{=2}$
$\downarrow$	T_D	$T_{=4}$

Label the tables.

	7	8
5	7	8
6	7	8

	1	6
1	1	1
3	0	1

	3	4
3	0	-1
2	-1	-2

	6	9
3	0	1
7	0	1

Name _____

L 12 **

Each table is for one of these.

$+$	$+_3$	$+_{10}$
$-$	$-_3$	$-_{10}$
$\times$	$\times_3$	$\times_{10}$
$\uparrow$	$\sqcap$	$T_{=2}$
$\downarrow$	T_D	$T_{=4}$

Using the information from the entries given, decide what each table is for and label it.

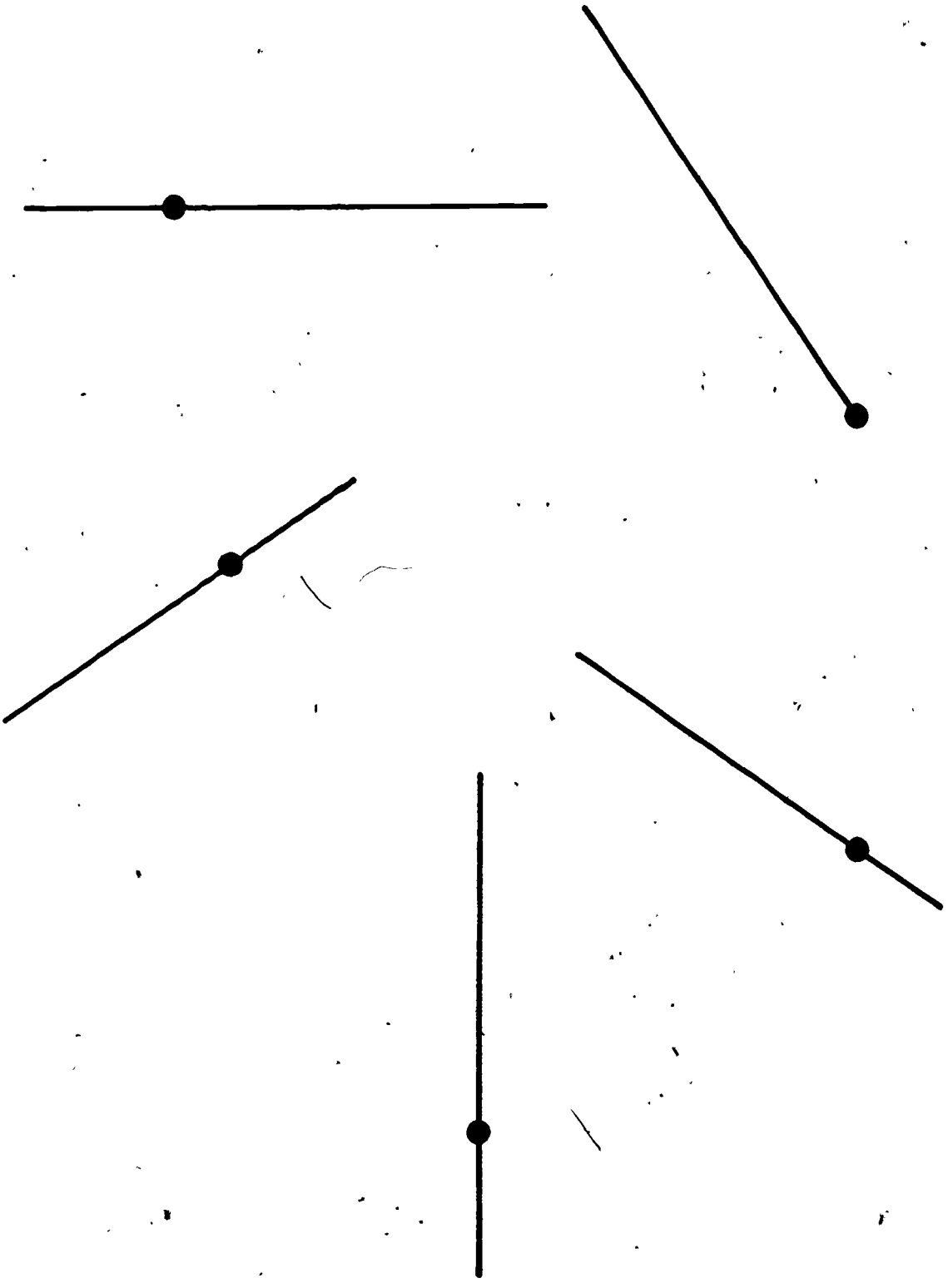
	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6						0			
7			1						
8							1		
9									

	1	2	3	4	5	6	7	8	9
1									
2						2			
3								4	
4									
5		0							
6									
7									
8									
9									

Name _____

G 01 *

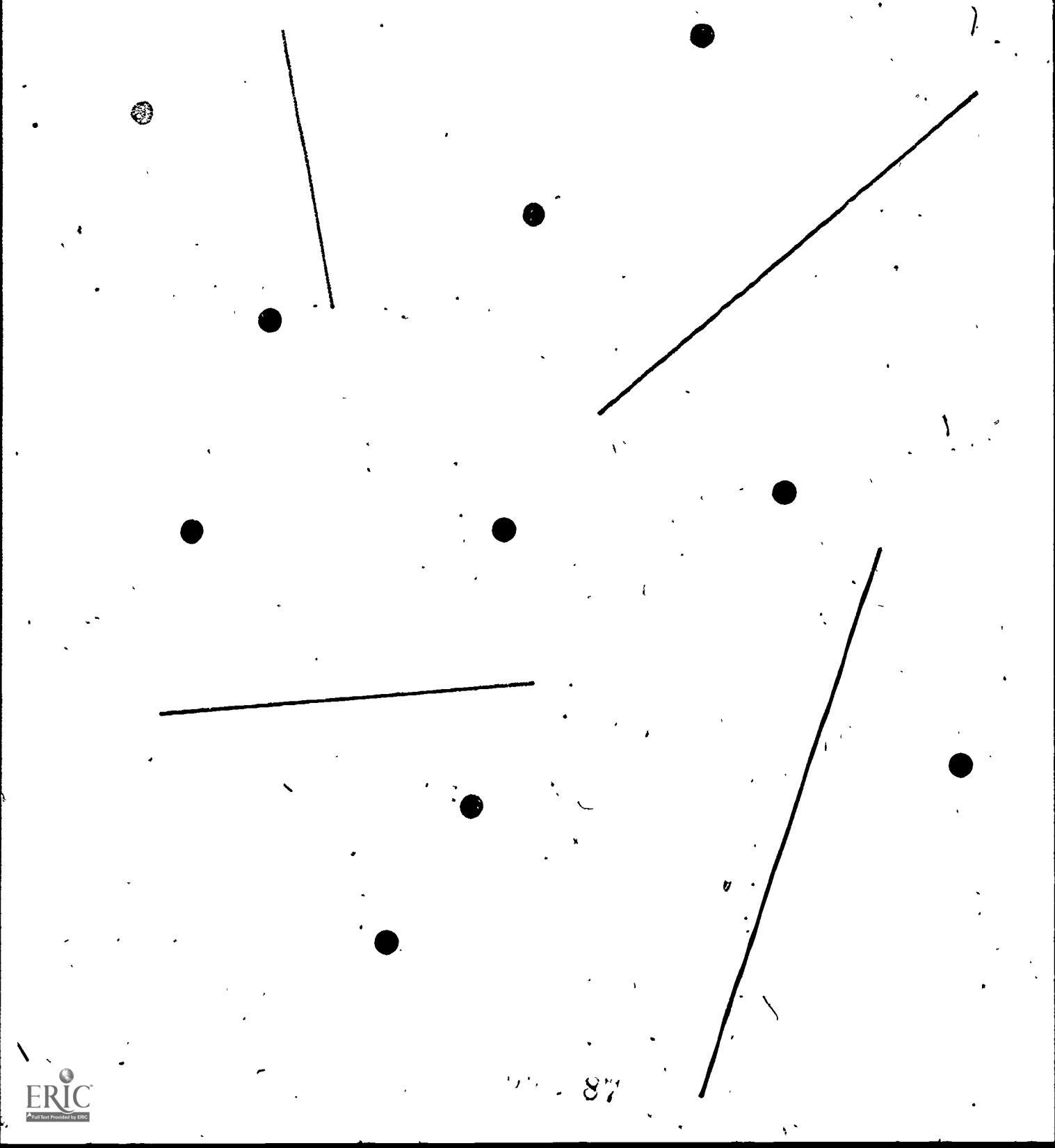
Draw a perpendicular to each line segment at the indicated point.
Remember, perpendicular line segments meet in a square corner.



Name _____

G 02 **

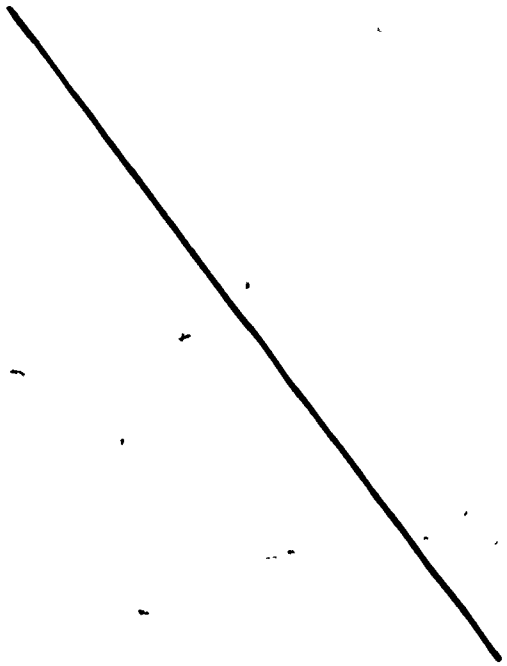
Draw a perpendicular through each dot to the line segment of the same color. Remember, perpendicular line segments meet in a square corner.



Name _____

G 03

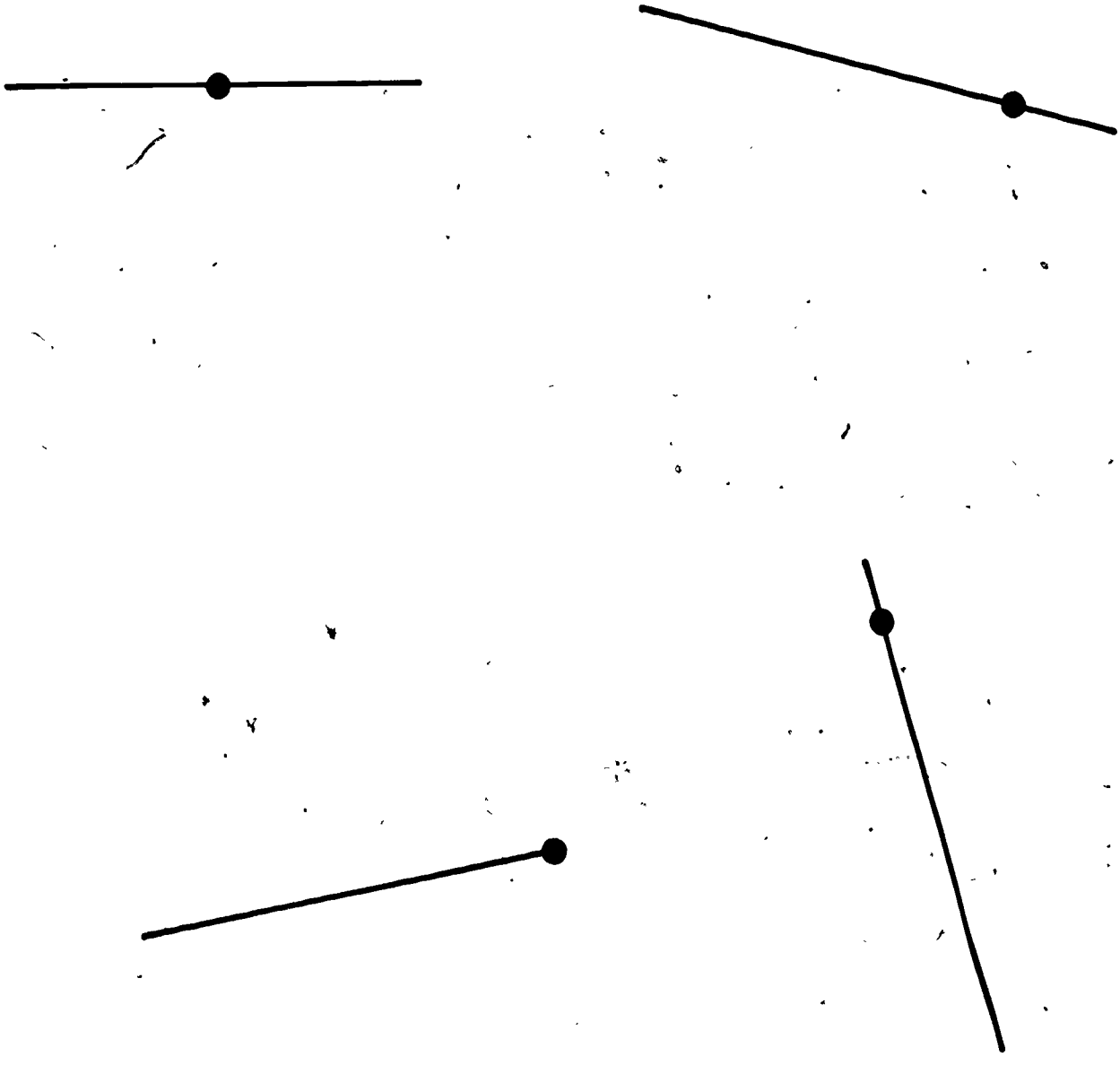
Use a compass and a straightedge to find the midpoint of each line segment.



Name _____

G 04 *

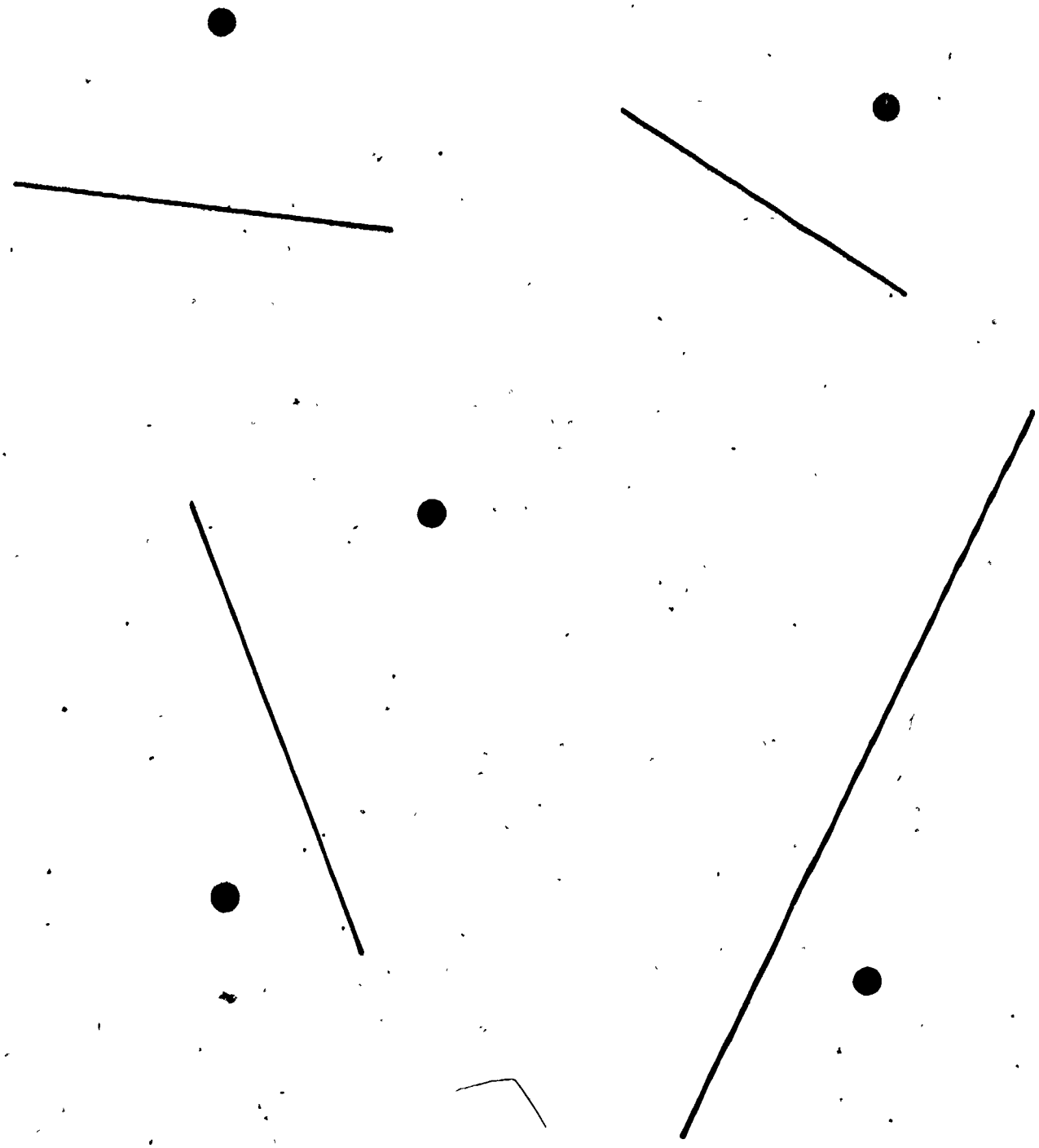
Draw a perpendicular to each line segment at the indicated dot.
Use your compass and a straightedge. Do not use your square corner.



Name _____

G 05 **

Draw a perpendicular to each line segment through the dot of the same color.
Use your compass and straightedge. Do not use your square corner.



Name _____

G 06

Use a compass and straightedge to construct four-sided shapes.
Each side of a shape must have the same length as one of these segments.

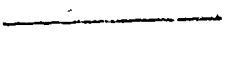
A _____ B _____

Draw as many different four-sided shapes as you can.

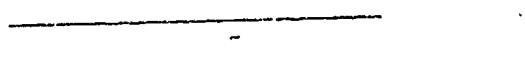
Name _____

G 07

A

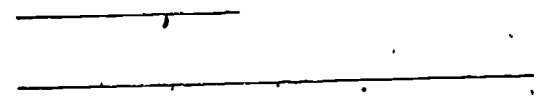


C

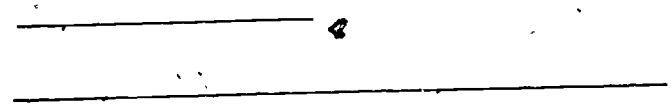


B

D



E

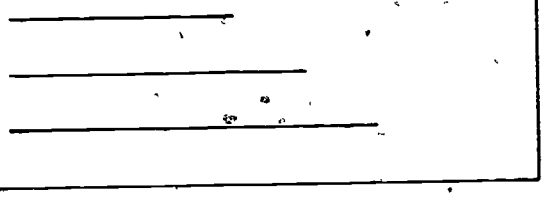


Use each pair of segments to draw as many triangles as you can. In a triangle, use each segment of the pair at least once. Mark each triangle with the letter of the pair of segments to distinguish them.

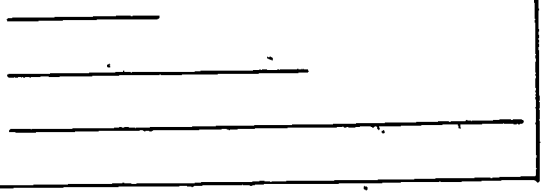
Name _____

G 08

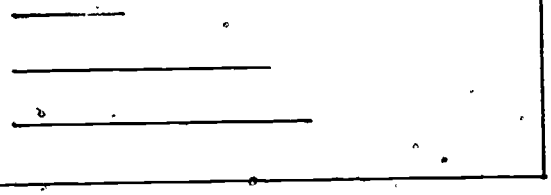
A



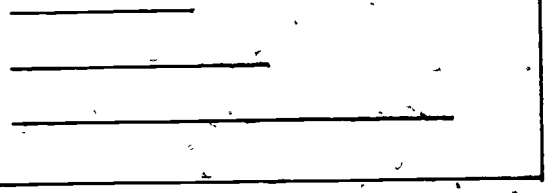
B



C



D

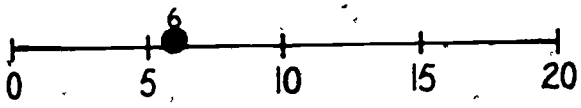


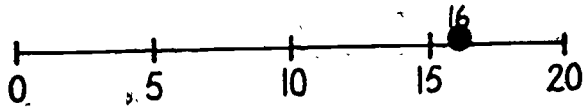
Use each set of segments to draw as many triangles as you can. Each segment must be used in a triangle. Mark each triangle with the letter of the set of segments to distinguish them.

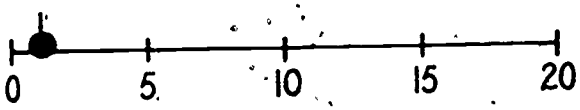
Name _____

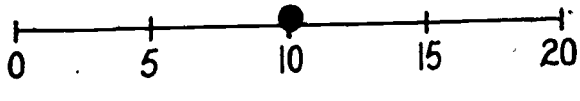
G 09 *

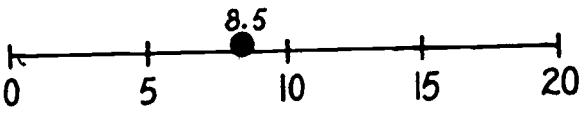
In each picture, one breaking point is given. Find, if possible, a second breaking point that gives a triangle.

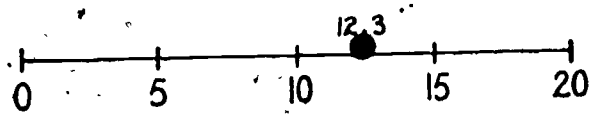








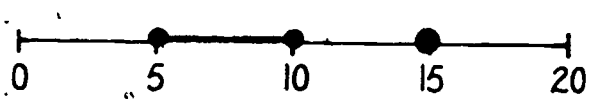


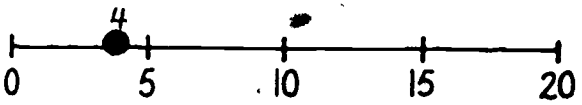


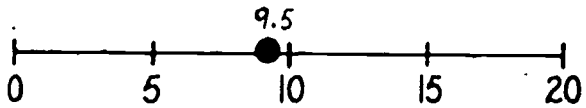
Name _____

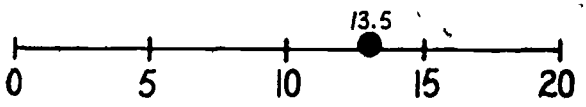
G 10 **

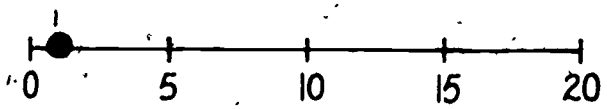
In each picture, one breaking point is given. Color blue all possible second points that give a triangle. If necessary, use red dots to indicate points which cannot be a second breaking point. An example is done for you.

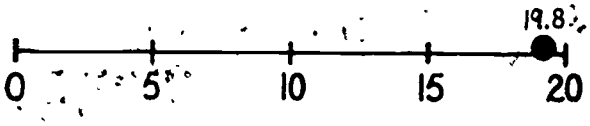








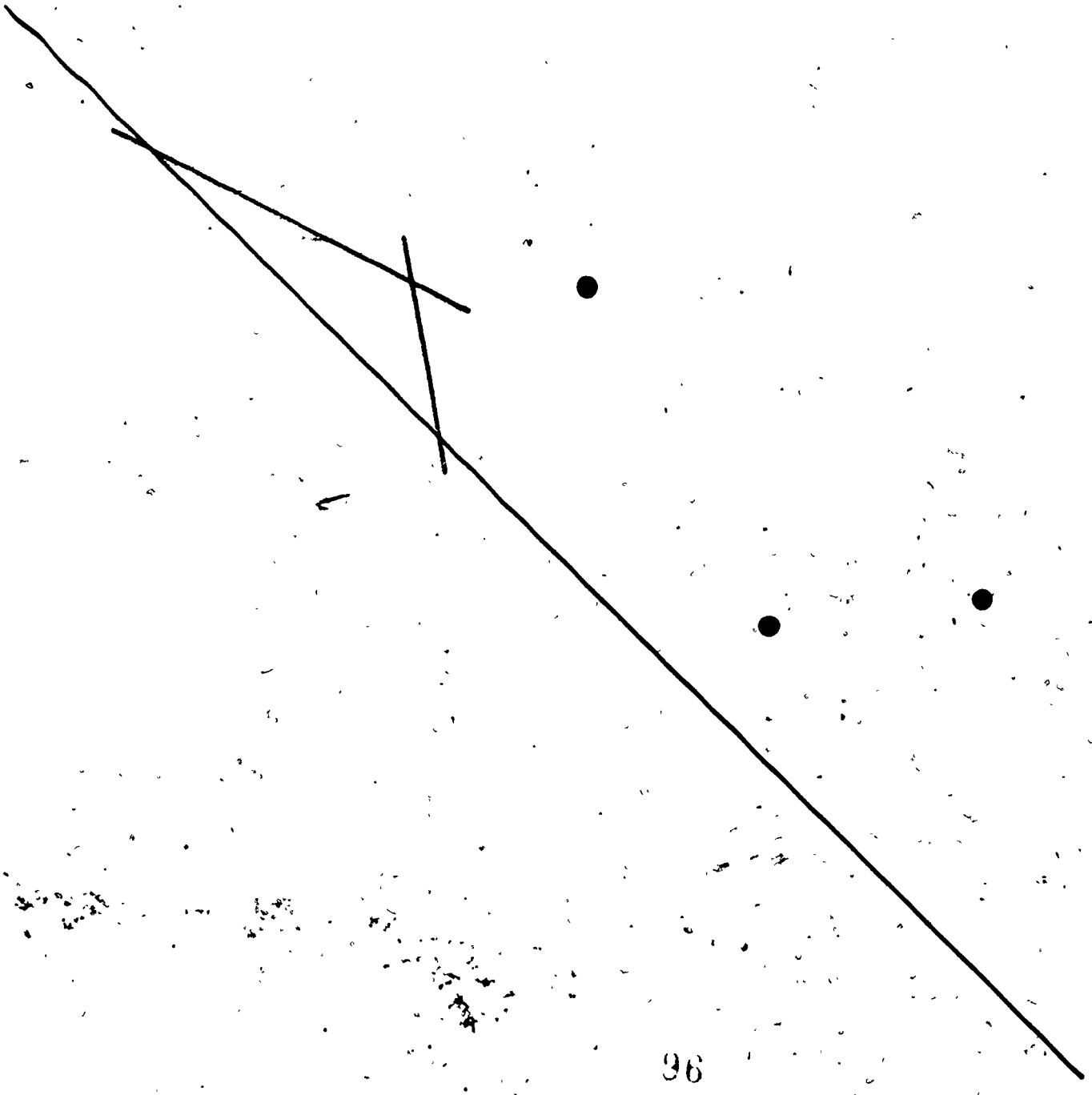




Name _____

G 11 *

Project each point twice: once parallel to the red segment and once parallel to the blue segment. Each time color the new points red or blue according to which projection you use. Connect new points that you get from the same point above the line with a green cord.

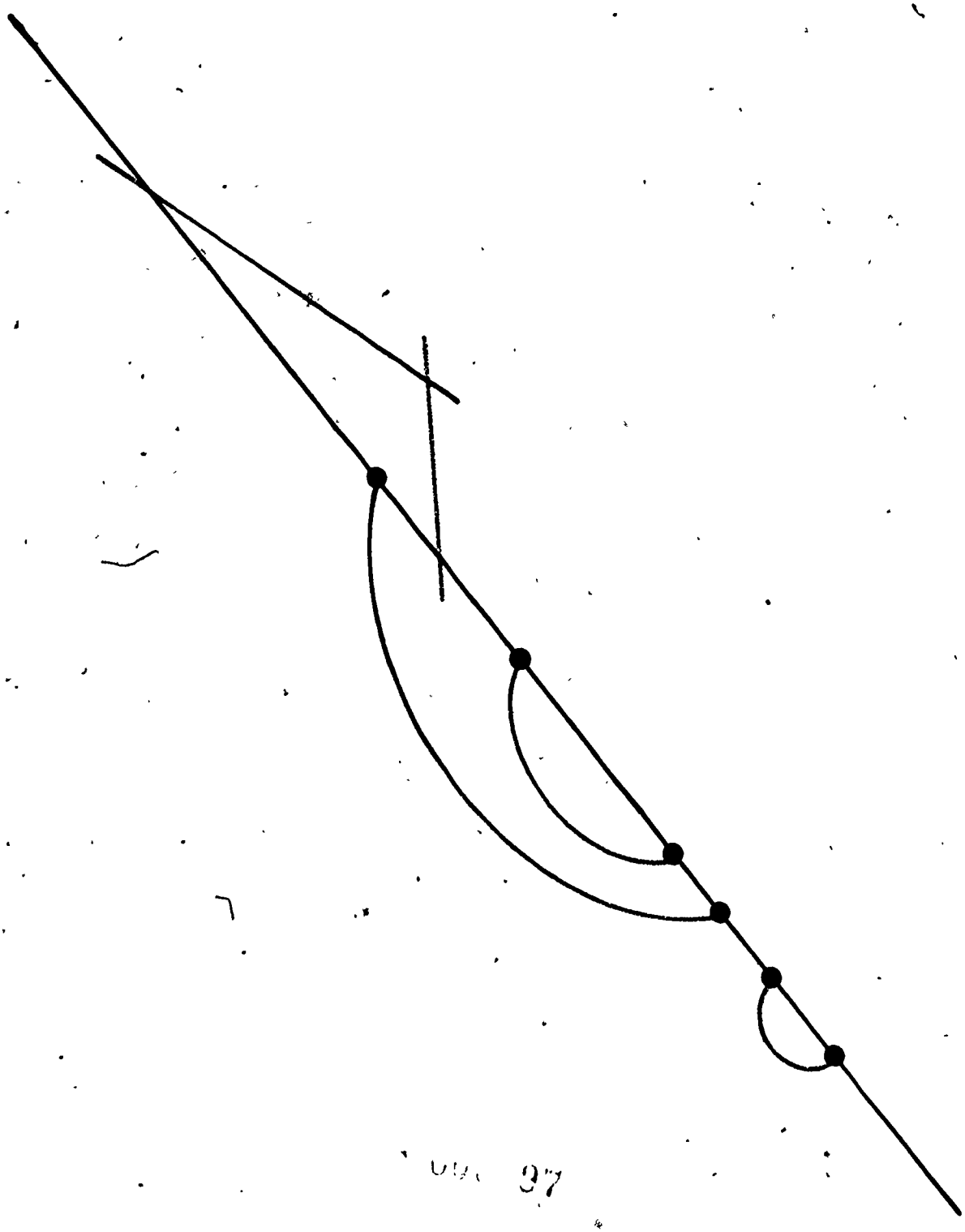


Name _____

G 12 **

Some pairs of points are connected by green cords.

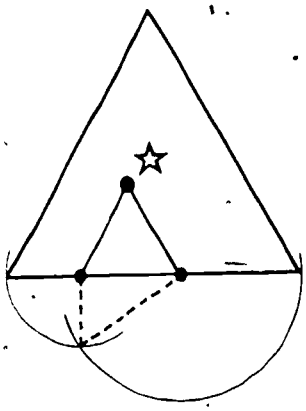
For each pair find a point above the line which projects onto them.

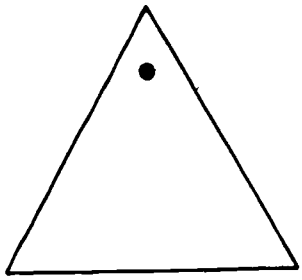


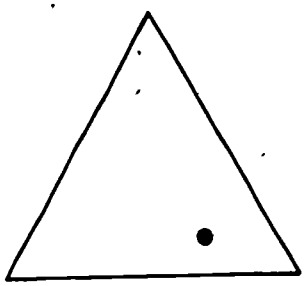
Name _____

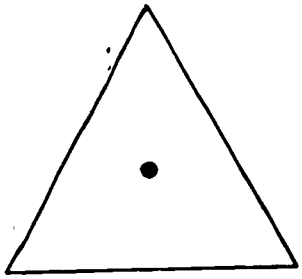
G 13

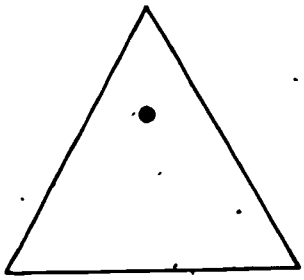
In each triangle there is a dot. Double project it onto the bottom side of the triangle. Use your compass to try to make a triangle with the three pieces. Mark the successes with a star. One example is done for you.

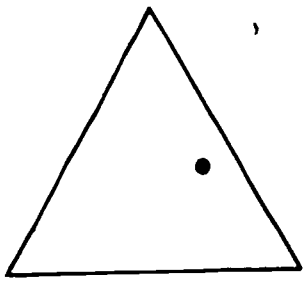


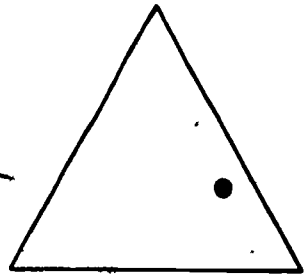


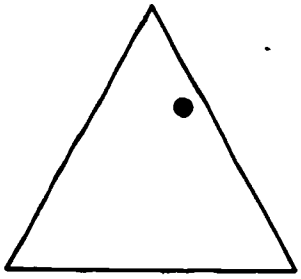


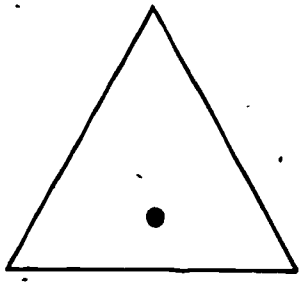


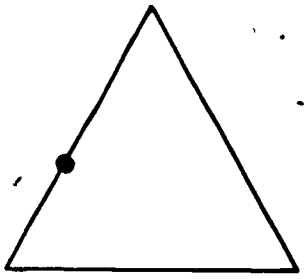


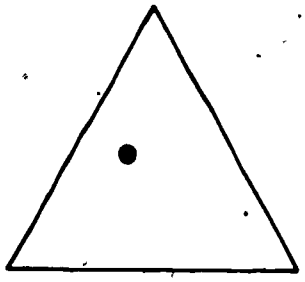


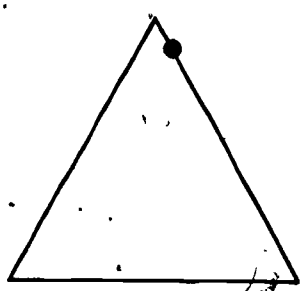




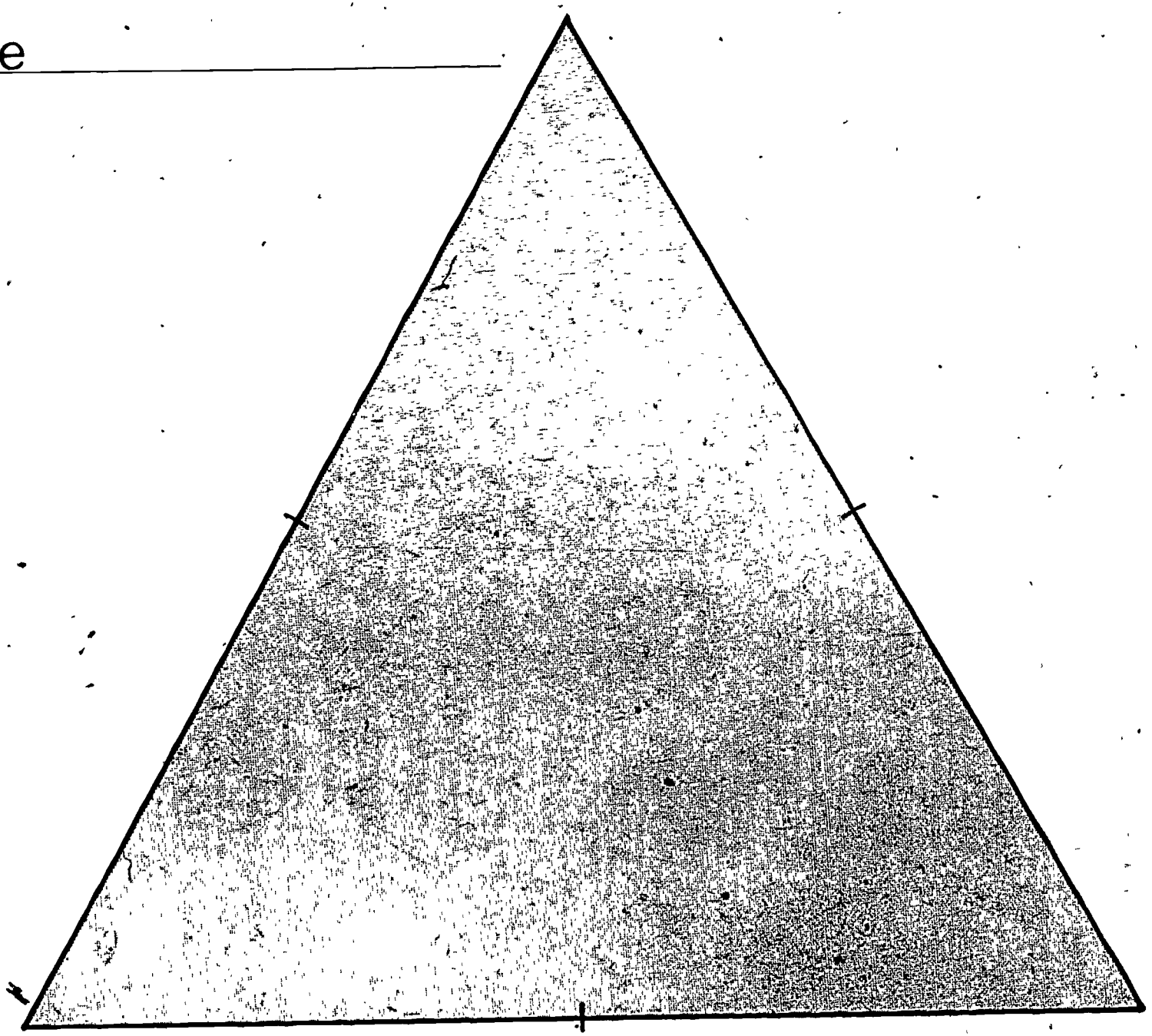








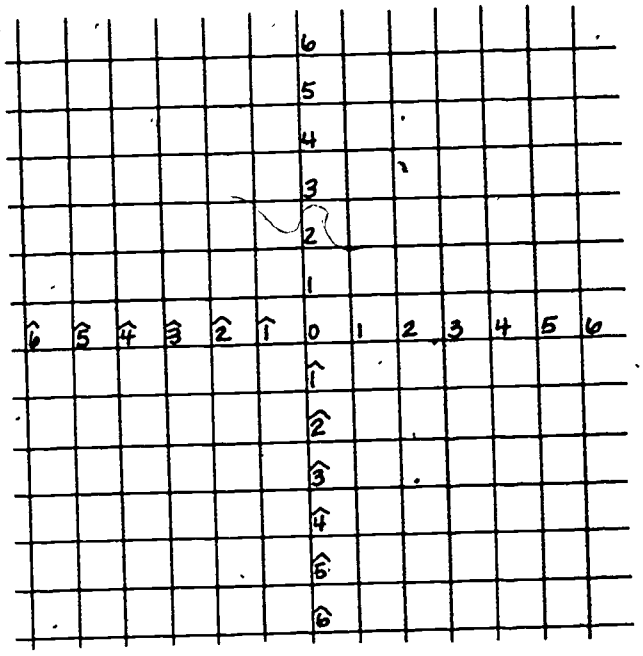
Name _____

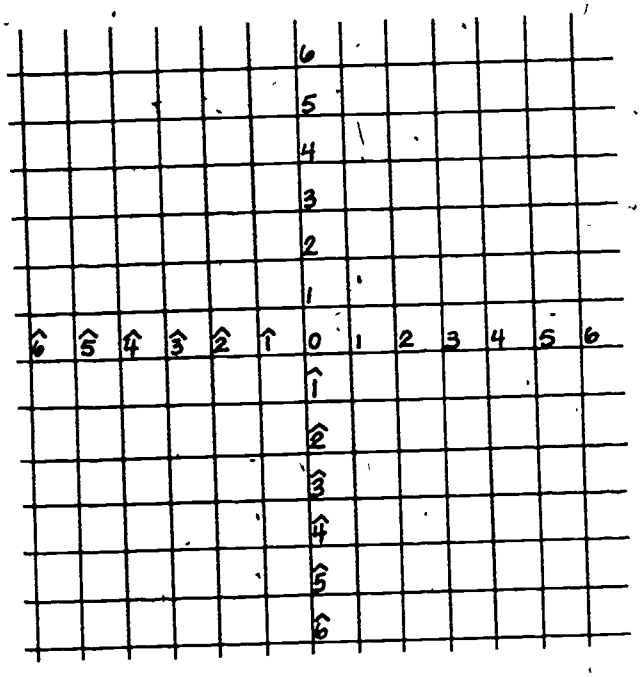


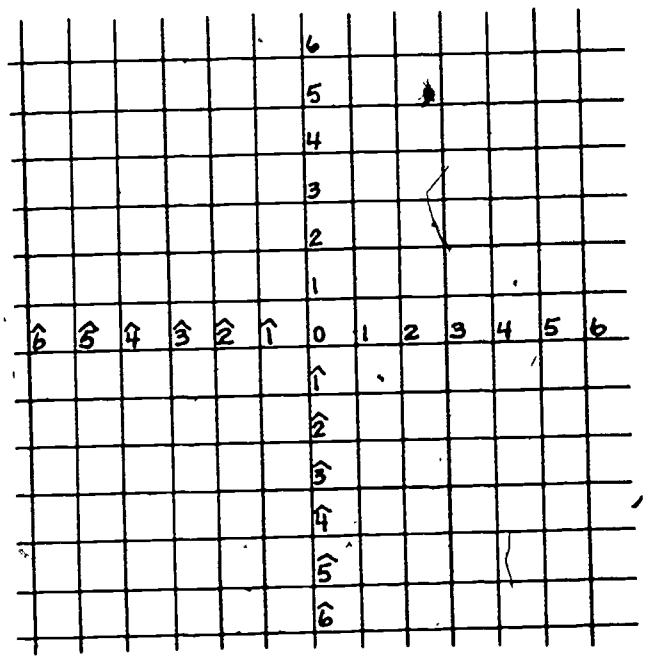
G 14

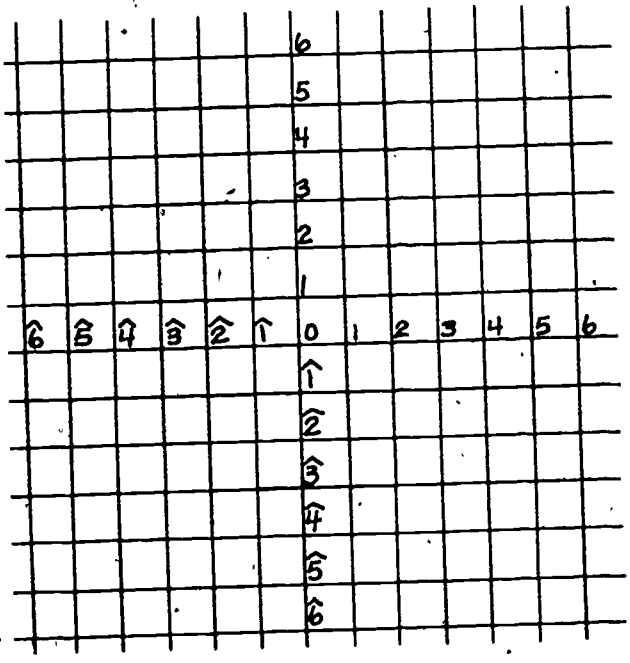
Name _____

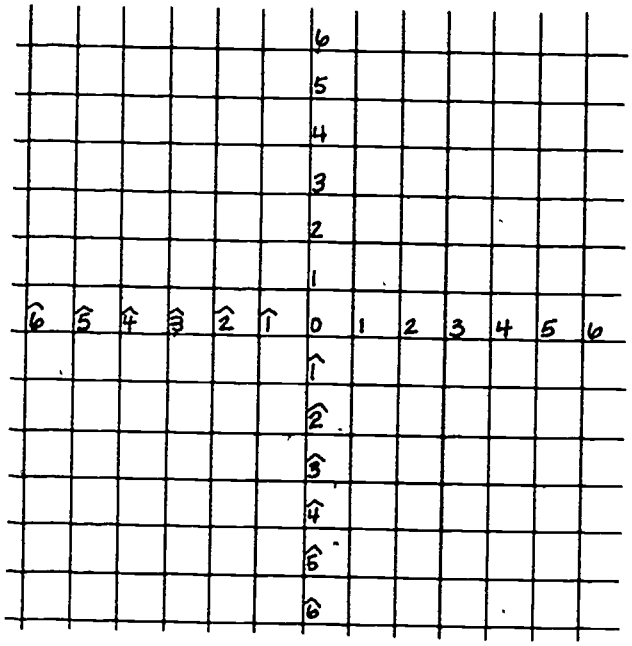
G '15

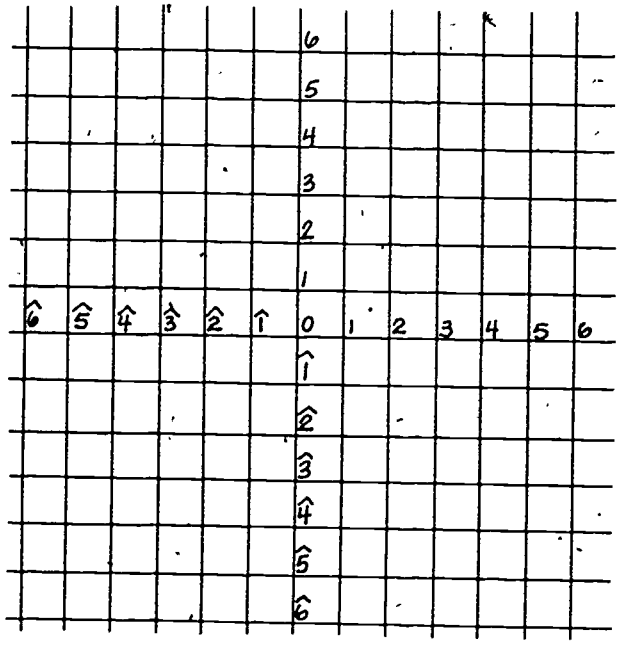


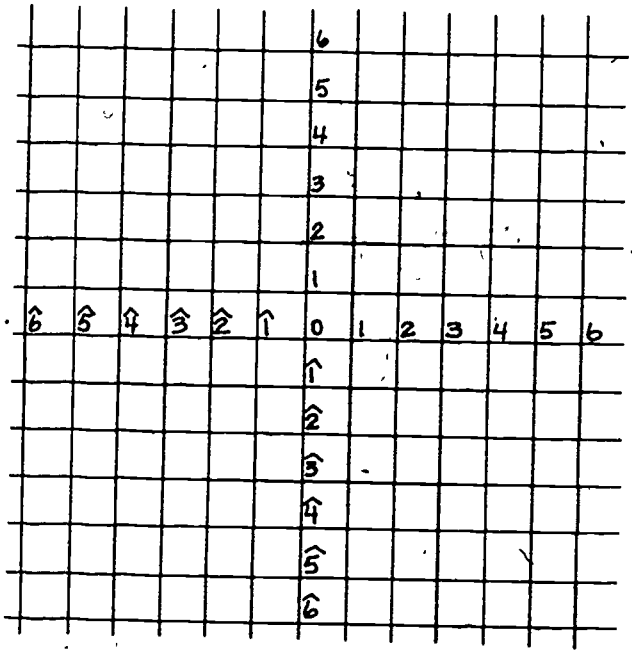


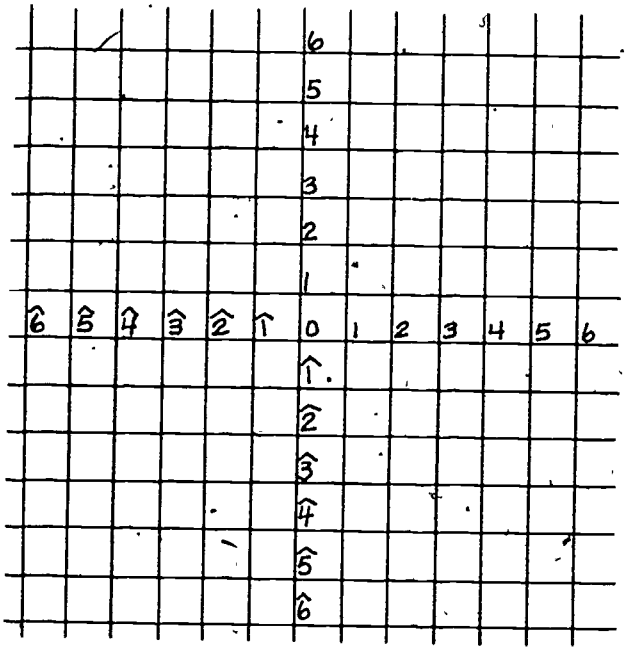





6 5 4 3 2 1 0 1 2 3 4 5 6
6 5 4 3 2 1 0 1 2 3 4 5 6


6 5 4 3 2 1 0 1 2 3 4 5 6
6 5 4 3 2 1 0 1 2 3 4 5 6


6 5 4 3 2 1 0 1 2 3 4 5 6
6 5 4 3 2 1 0 1 2 3 4 5 6


6 5 4 3 2 1 0 1 2 3 4 5 6
6 5 4 3 2 1 0 1 2 3 4 5 6

Name _____

P 01 *

Draw a red dot for each true number story.

<	5	12	15	18	20
2					
4					
5					
30					
60					

D	5	12	15	18	20
2					
4					
5					
30					
60					

Name

P 02 **

Draw a red dot for each true number story.

M	5	12	15	18	20
2					
4					
5					
30					
60					

=3	5	12	15	18	20
2					
4					
5					
30					
60					

ERIC

Name _____

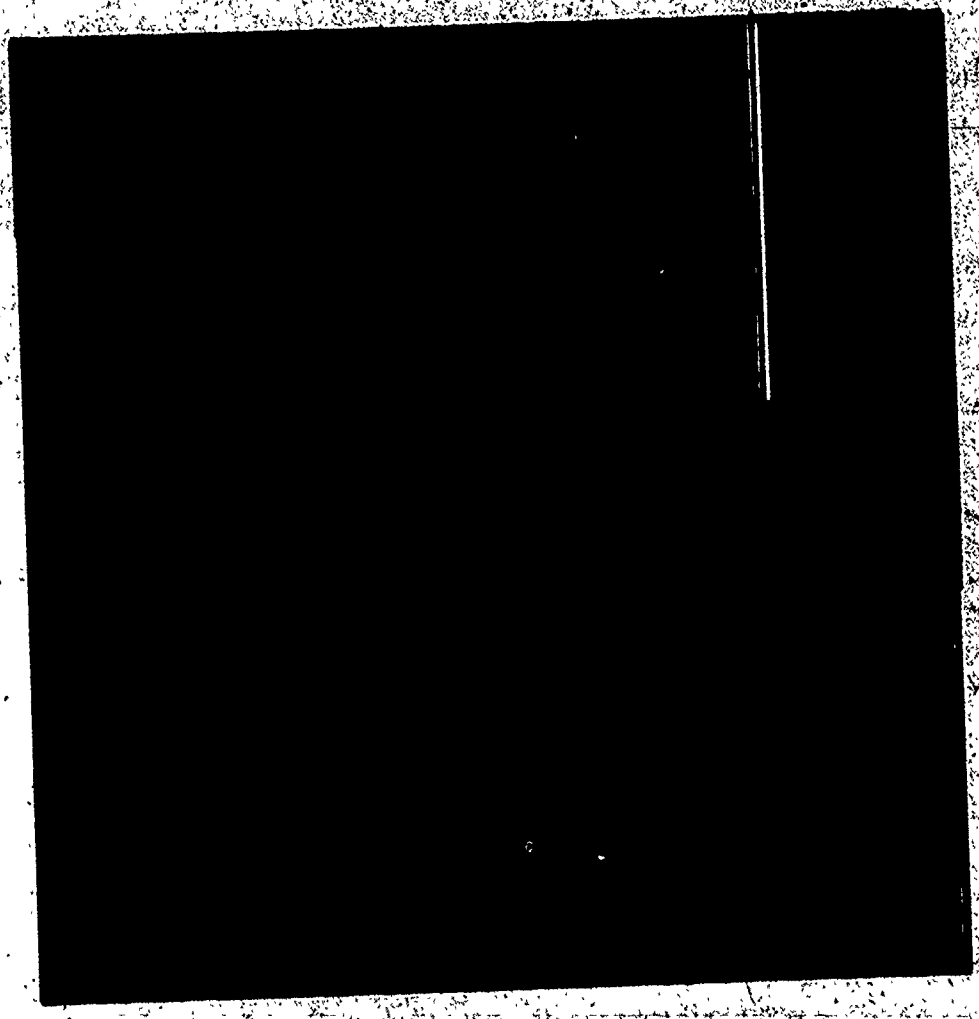
P 03

Complete the tables.

+	$\frac{1}{4}$	$\frac{4}{3}$	$\frac{3}{2}$
$\frac{1}{2}$			
$\frac{2}{3}$			
$\frac{3}{4}$			

x	$\frac{1}{4}$	$\frac{4}{3}$	$\frac{3}{2}$
$\frac{1}{2}$			
$\frac{2}{3}$			
$\frac{3}{4}$			

Name: _____ P 04 *



How many squares of this size fit into the red region? _____

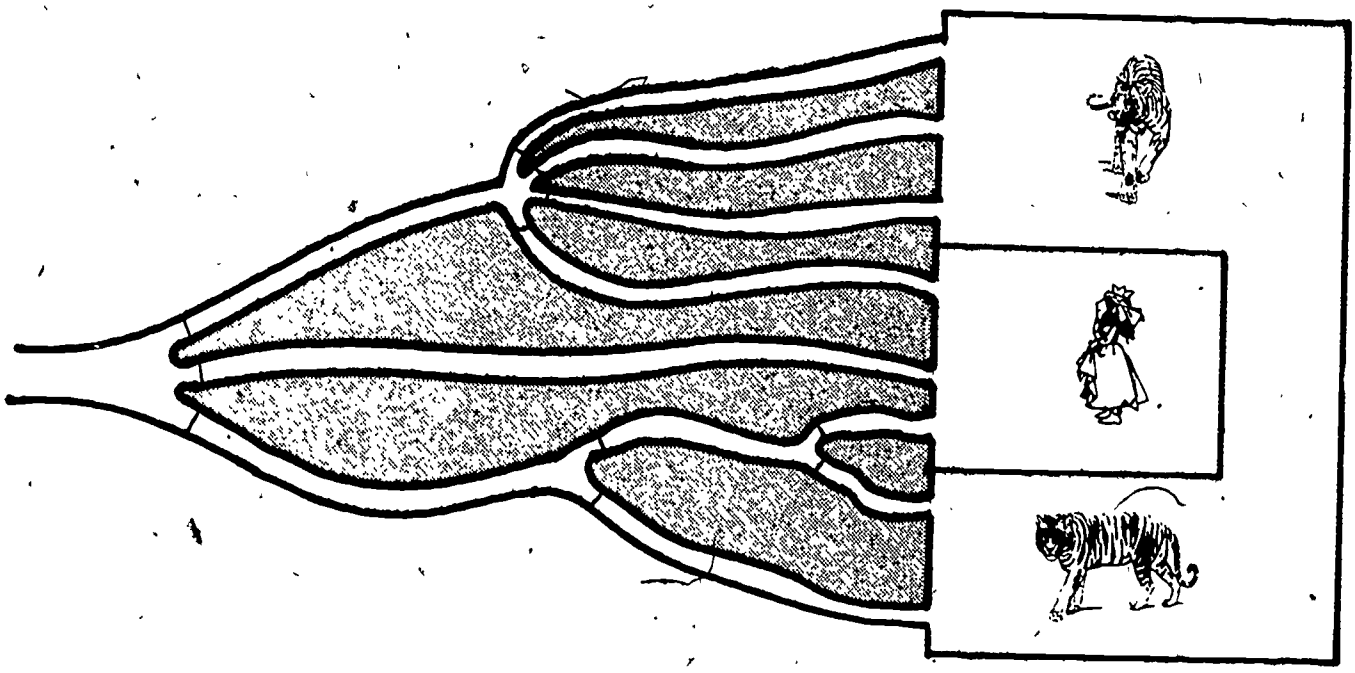
How many squares of this size fit into the blue region? _____

Use a ruler if you wish.

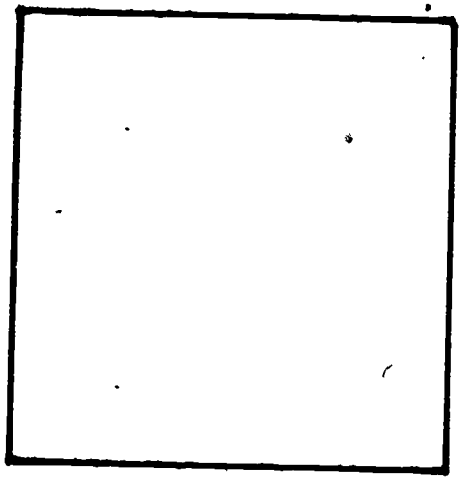
Name _____

P 05 **

The King has another maze near the castle. If Reynaldo goes through this maze, find his probability of entering the room with the princess.



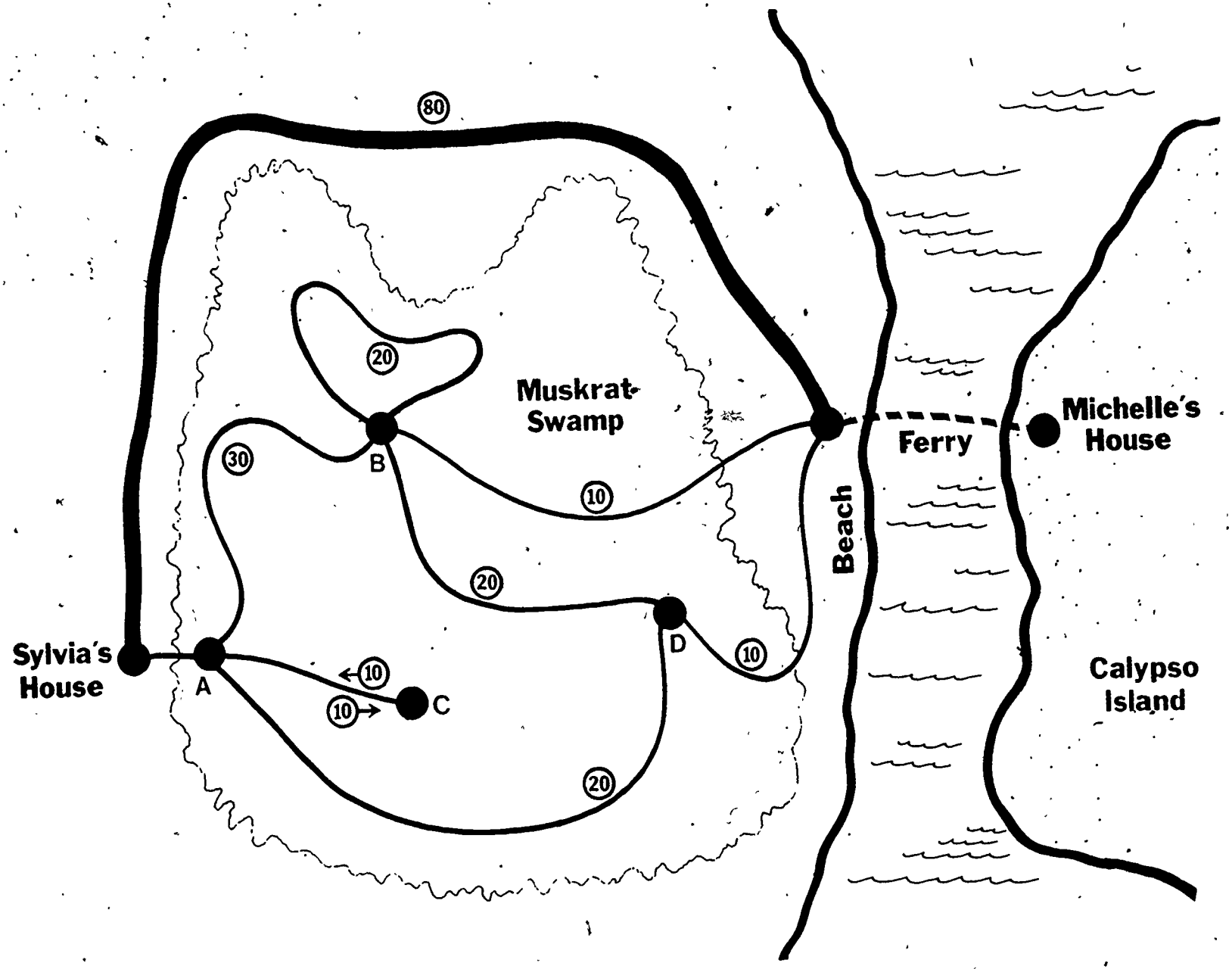
Use this square to help you solve the problem.



What are Reynaldo's chances of finding the princess? _____

What are Reynaldo's chances of finding the tigers? _____

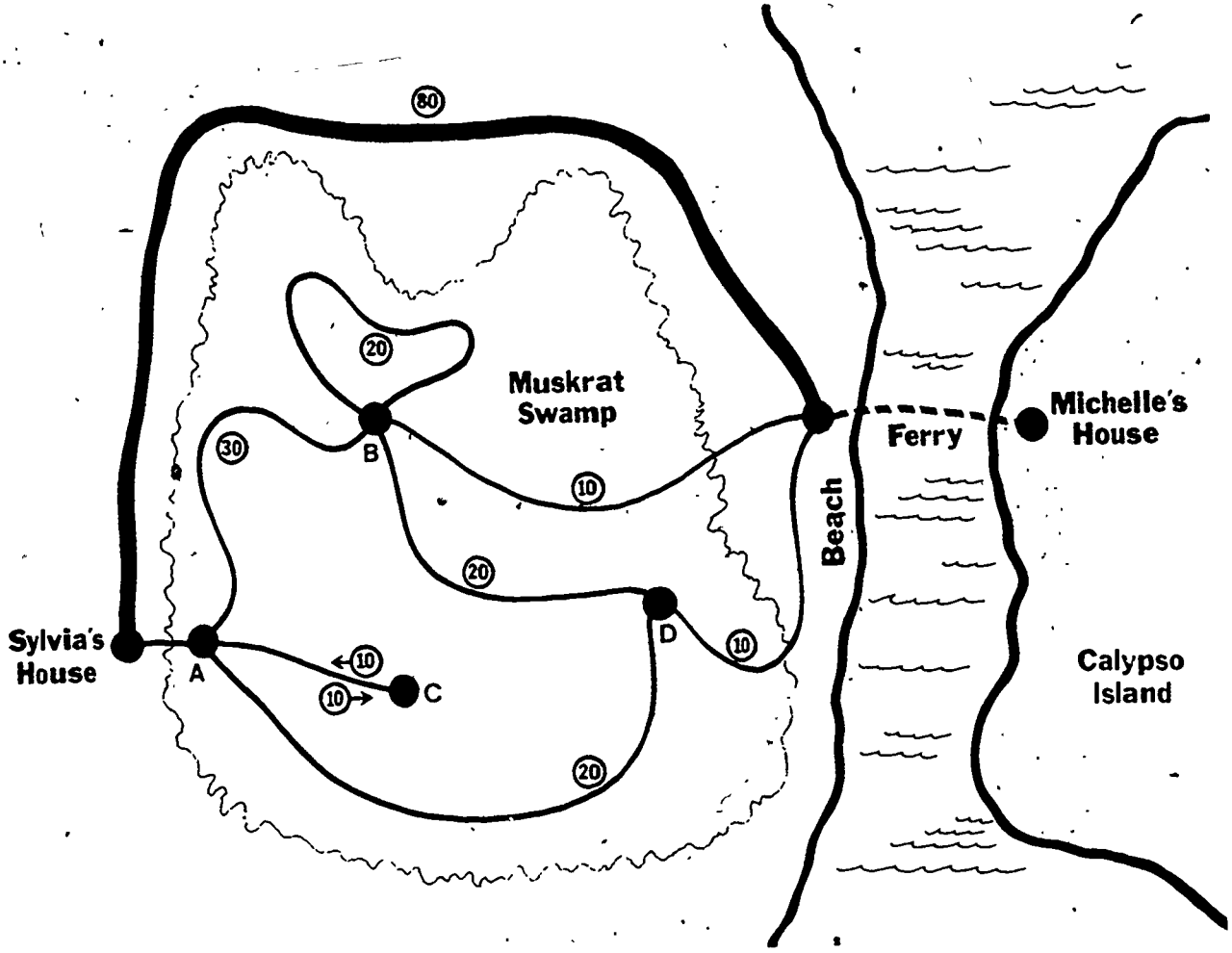
Name


80
20
Muskrat Swamp
30
B
10
20
Sylvia's House
A
10
10
C
D
10
20
Beach
Ferry
Michelle's House
Calypso Island

P 06

Name _____

P 07 *



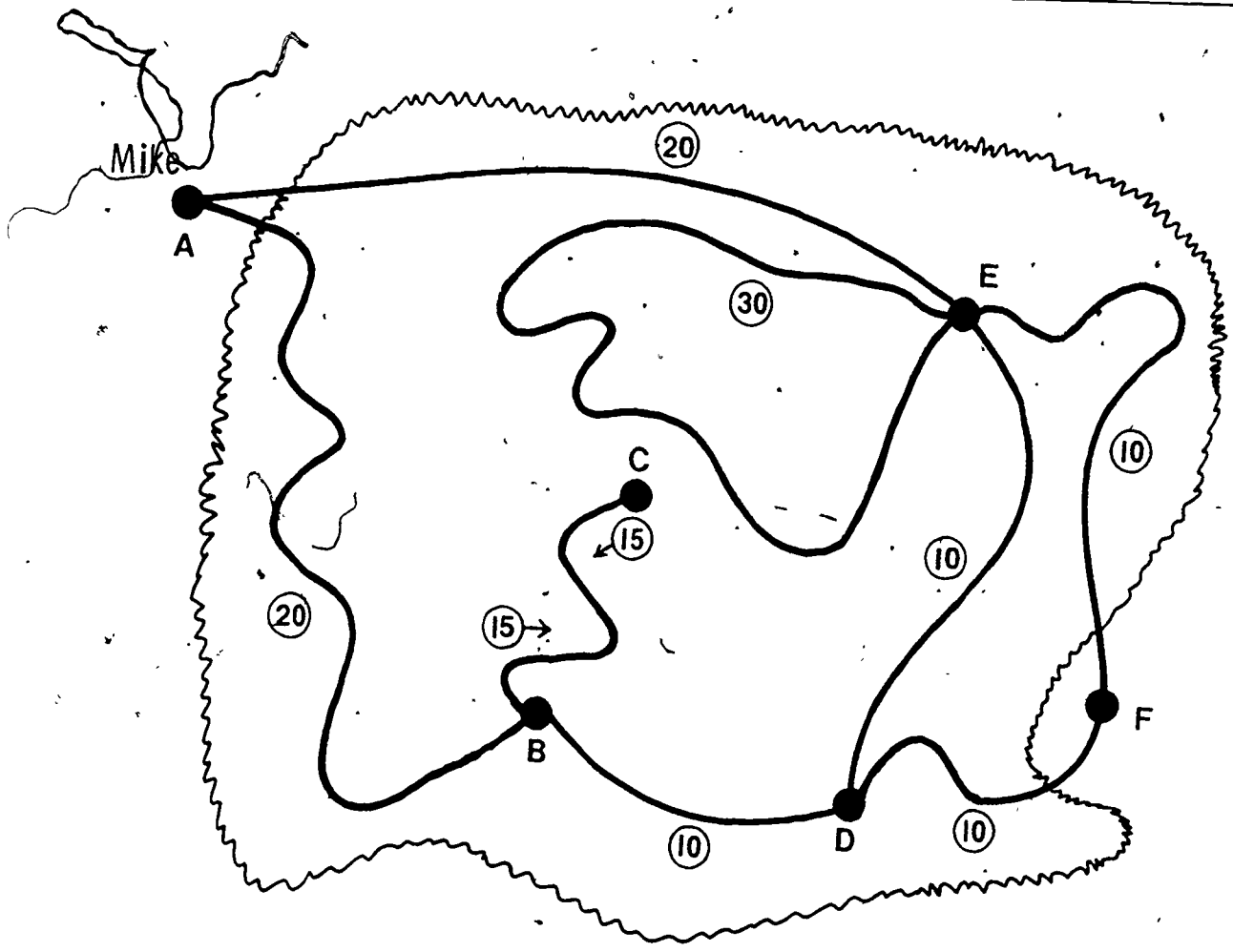
Sylvia must get to the ferry in 40 minutes.

Use this square to calculate her probability of arriving on time.

What is Sylvia's probability of getting to the ferry on time? _____

Name

P 08 **



Mike is at A. He must travel to F in 60 minutes or less. Calculate his probability of success if he randomly chooses which paths to follow, but does not take the same path twice.

On time

Late

What is Mike's probability of getting to F in 60 minutes or less?

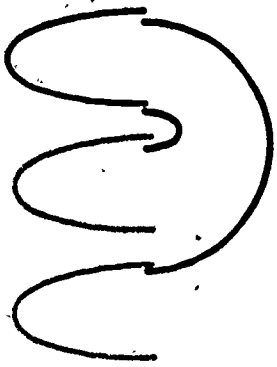
Name _____

P 09 *

For each picture, do the two knots form one long piece of rope? Circle your answer.

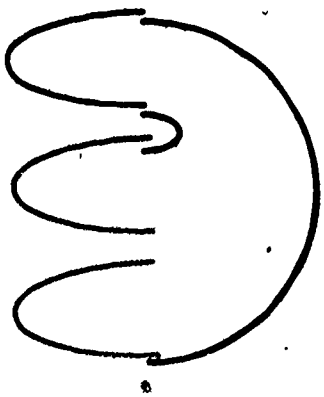
Yes No

Yes No

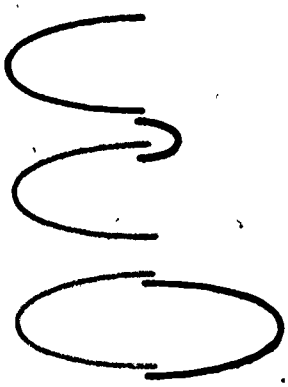


Yes No

Yes No



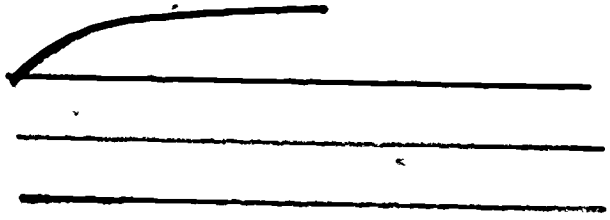
Yes No

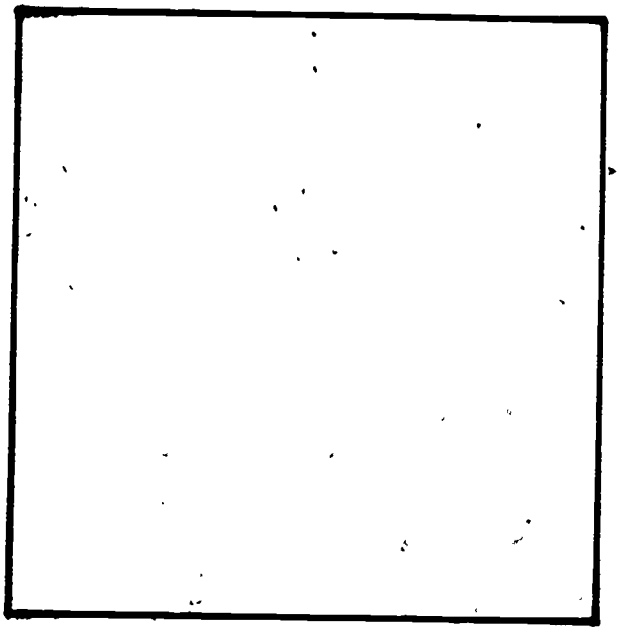


Yes No

Name _____

P 10 < **





Failure

Success

Name _____

P 11