Name: _____ Period: ____

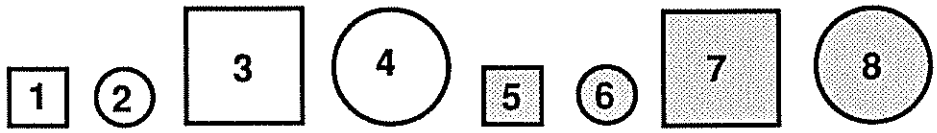
FIGURE SORT

(2 day Assignment) ◆

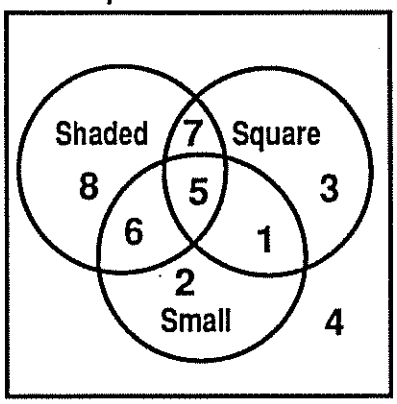
3/3 - 3/4

Due Wednesday!

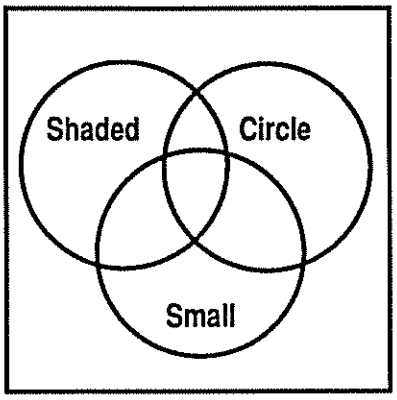
Write the number of each of the eight figures below in the appropriate region of each diagram.



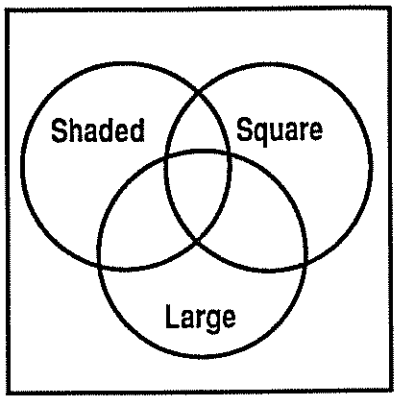
Example:



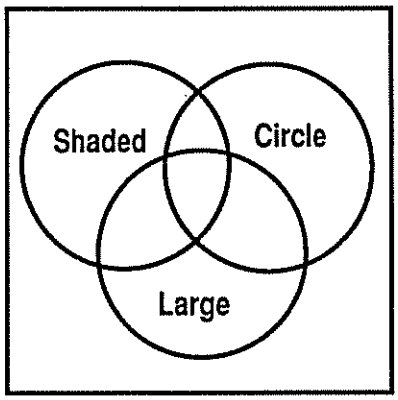
1.



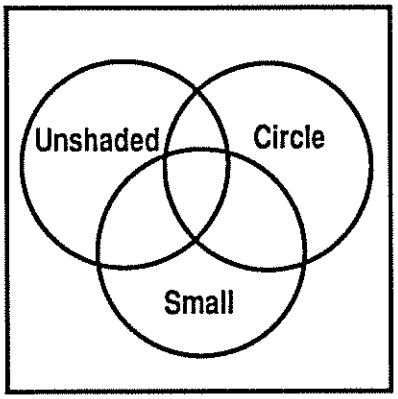
2.



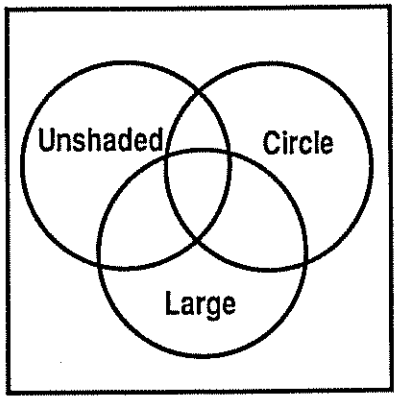
3.



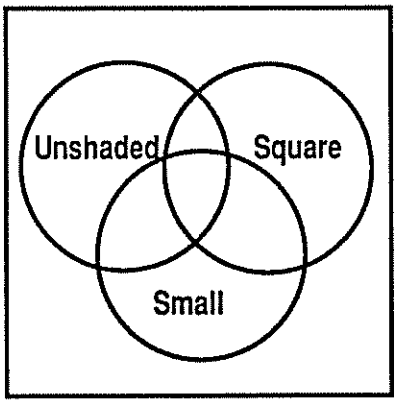
4.



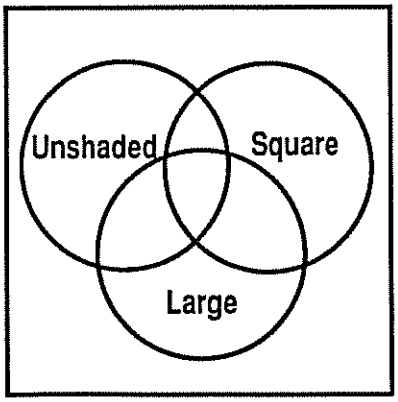
5.



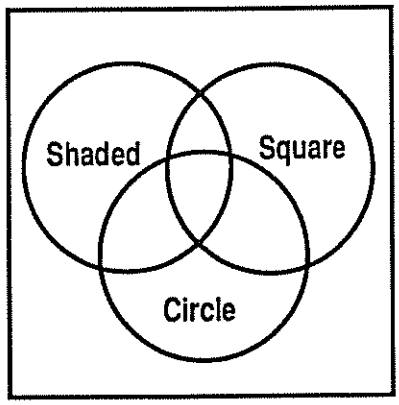
6.



7.



8.



What Were the Crash Dummy's Last Words?

For each set of exercises, there is one extra answer. Write the letter of this answer in the corresponding box at the right.

10	2	5	8	11	1	7	4	12	3	9	6	

In Sets 1-3, write each percent as a fraction in lowest terms.

• 1 •		• 2 •		• 3 •	
a. 40%	(P) $\frac{1}{50}$	a. 75%	(J) $\frac{43}{100}$	a. 62%	(T) $\frac{3}{2}$
	(E) $\frac{9}{20}$		(L) $\frac{3}{4}$		(C) $\frac{7}{100}$
b. 55%	(U) $\frac{2}{5}$	b. 88%	(I) $\frac{19}{50}$	b. 150%	(N) $\frac{9}{4}$
c. 2%	(F) $\frac{9}{25}$	c. 30%	(O) $\frac{22}{25}$	c. 225%	(S) $\frac{31}{50}$
d. 36%	(Y) $\frac{11}{20}$	d. 43%	(C) $\frac{3}{10}$	d. 7%	(A) $\frac{7}{4}$

In Sets 4-6, write each fraction as a percent.

• 4 •		• 5 •		• 6 •	
a. $\frac{19}{100}$	(B) 88%	a. $\frac{3}{5}$	(D) 125%	a. $\frac{18}{200}$	(N) 25%
	(M) 96%		(F) 5%		(E) 125%
b. $\frac{7}{20}$	(H) 35%	b. $\frac{5}{4}$	(L) 60%	b. $\frac{3}{200}$	(P) 1.5%
c. $\frac{33}{50}$	(G) 66%	c. $\frac{17}{10}$	(Y) 17%	c. $\frac{75}{300}$	(S) 9%
d. $\frac{24}{25}$	(O) 19%	d. $\frac{1}{20}$	(T) 170%	d. $\frac{5}{2}$	(W) 250%

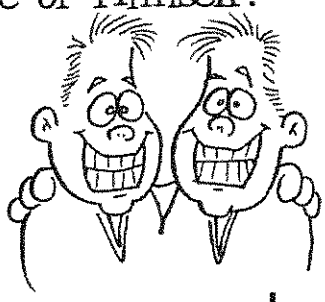
In Sets 7-9, write each decimal as a percent.

• 7 •		• 8 •		• 9 •	
a. 0.44	(H) 4.4%	a. 0.75	(E) 300%	a. 0.038	(N) 3.8%
	(D) 44%		(O) 3%		(S) 0.5%
b. 0.09	(N) 90%	b. 0.3	(L) 7.5%	b. 3.8	(K) 50%
c. 0.044	(C) 9%	c. 0.075	(I) 75%	c. 0.05	(D) 380%
d. 0.9	(A) 0.9%	d. 0.03	(U) 30%	d. 0.005	(T) 5%

In Sets 10-12, write each percent as a decimal.

• 10 •		• 11 •		• 12 •	
a. 66%	(D) 0.066	a. 37.5%	(B) 0.002	a. $8\frac{1}{2}$%	(R) 0.4
	(G) 6.6		(S) 0.375		(L) 4
b. 40%	(L) 0.04	b. 2%	(P) 0.02	b. 400%	(E) 0.004
c. 6.6%	(R) 0.4	c. 0.2%	(M) 0.2	c. 110%	(O) 0.085
d. 4%	(F) 0.66	d. 375%	(W) 3.75	d. 0.4%	(F) 1.1

Why Did the Scientist Create an Exact Duplicate of Himself?



Choose the correct answer for each exercise and circle the letter pair next to it. Write the upper case letter in the box containing the lower case letter.

In Exercises 1-2, choose the number that is written in scientific notation.

1. n•R 12.3×10^4 k•T 1.23×10^5 f•Y 0.123×10^6
2. n•P 0.45×10^{-2} b•X $4.5 + 10^{-3}$ u•A 4.5×10^{-3}

In Exercises 3-6, find the value of n.

3. $72{,}000{,}000 = 7.2 \times 10^n$ v•K 6 f•S 10
4. $33{,}300{,}000{,}000 = 3.33 \times 10^n$ q•I 7 p•F 12
5. $0.00008 = 8 \times 10^n$ d•P −3 s•K −8
6. $0.00000000625 = 6.25 \times 10^n$ x•U −5 m•C −9

In Exercises 7-12, write the number in decimal form.

7. 4.9×10^5 z•D 49,000 w•B 0.0000049
8. 4.9×10^{-5} j•V 4900 b•E 490,000
9. 4.90×10^4 o•O 0.000049 y•R 4,900,000
10. 8.75×10^6 a•S 875 e•A 8,750,000
11. 8.75×10^{-2} t•M 875,000 i•U 0.000000875
12. 8.75×10^{-7} r•N 0.0875 c•F 0.0000000875

In Exercises 13-18, write the number in scientific notation.

13. 34,000 k•R 3.4×10^{-4} s•G 3.4×10^{-6}
14. 3,400,000,000 q•K 3.4×10^{-7} a•H 3.4×10^9
15. 0.0000034 w•O 3.4×10^4 e•B 3.4×10^{10}
16. 92,200,000 j•S 9.22×10^7 n•F 9.22×10^8
17. 0.00922 l•D 9.22×10^3 g•P 9.22×10^{-7}
18. 0.0000000922 y•N 9.22×10^{-8} d•W 9.22×10^{-3}

In Exercises 19-22, write the number in scientific notation.

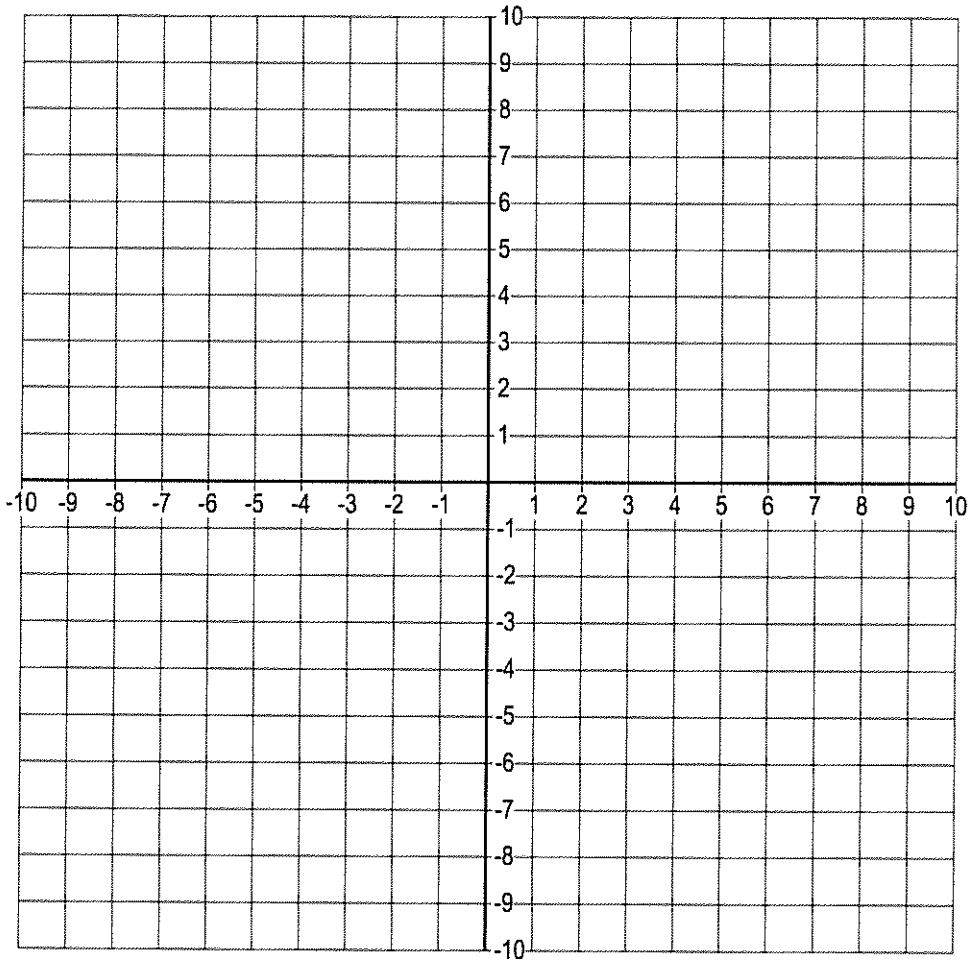
19. 16.6×10^3 o•G 1.66×10^5 p•N 1.66×10^4
20. 0.166×10^8 h•J 1.66×10^7 g•Y 1.66×10^{10}
21. 0.55×10^{-4} n•L 5.5×10^{-11} t•S 5.5×10^{-6}
22. 55×10^{-12} l•V 5.5×10^{-13} v•R 5.5×10^{-5}

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z

Coordinate Picture

Name: _____ Date: _____

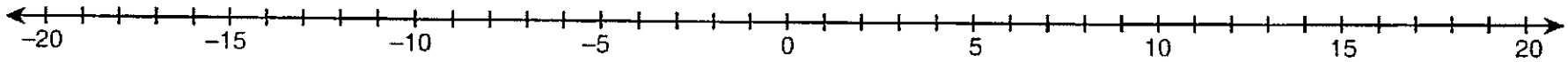
There is a picture hidden in this grid. Connect the points with lines to reveal it.



Line 1: (1,9), (1,7), (2,7), (3,8), (2,9), (1,9) **Line 2:** (0,-3), (0,-2), (-1,-1), (-2,-1), (-3,-2) **Line 3:** (-1,-2), (-2,-2), (-2,-5), (-1,-3), (-1,-2) **Line 4:** (3,4), (4,4), (5,3), (5,2), (4,3), (3,3), (3,4) **Line 5:** (0,7), (-1,6), (0,5), (1,6), (0,7) **Line 6:** (-2,9), (-1,9), (-1,7), (-2,7), (-3,8), (-2,9) **Line 7:** (-3,5), (-2,4), (-2,3), (-3,2) **Line 8:** (2,-1), (3,2), (4,2), (5,0), (5,-2), (4,-3), (4,-5), (5,-5), (5,-4), (6,-4), (6,-5), (7,-5), (7,-3), (6,-2), (6,3), (4,5), (2,5), (2,6), (3,6), (4,7), (4,9), (3,10), (-3,10), (-4,9), (-4,7), (-3,6), (-2,6), (-2,5), (-4,5), (-6,3), (-6,-2), (-7,-3), (-7,-5), (-6,-5), (-6,-4), (-5,-4), (-5,-5), (-4,-5), (-4,-3), (-5,-2), (-5,0), (-4,2), (-3,2), (-2,-1) **Line 9:** (-4,4), (-3,4), (-3,3), (-4,3), (-5,2), (-5,3), (-4,4) **Line 10:** (2,-2), (1,-2), (1,-3), (2,-5), (2,-2) **Line 11:** (3,-2), (3,-7), (4,-7), (5,-8), (5,-10), (1,-10), (1,-5), (0,-3), (-1,-5), (-1,-10), (-5,-10), (-5,-8), (-4,-7), (-3,-7), (-3,-2) **Line 12:** (0,3), (1,2), (1,1), (0,0), (-1,1), (-1,2), (0,3) **Line 13:** (3,5), (2,4), (2,3), (3,2) **Line 14:** (0,-2), (1,-1), (2,-1), (3,-2)

Why Do Flies Always Bring Their Stopwatches to Parties?

Write an integer for each exercise. Find the point on the number line that corresponds to the integer. Write the letter of the exercise above the number line at that point.



Write an integer for each situation.

- (E) 3 units to the left of 0
- (S) the opposite of 8
- (N) 15 ft above sea level
- (E) a gain of 6 yd
- (I) 5° below zero
- (N) a deposit of $20
- (E) 14 steps backward
- (T) four seconds after liftoff
- (I) a loss of ten pounds
- (W) one floor down
- (E) 19 m below sea level
- (H) the opposite of −11

Write an integer for each expression.

- (A) $-(17)$
- (I) $-(-14)$
- (E) $|-1|$
- (R) $|8|$
- (U) $-n$ if $n = 16$
- (G) $-n$ if $n = -16$
- (B) $-(12 + 8)$
- (H) $|16 - 11|$
- (E) $-|9|$
- (S) $-|-15|$
- (A) $|x|$ if $x = -12$
- (F) $-|x|$ if $x = -12$

Write an integer for each question.

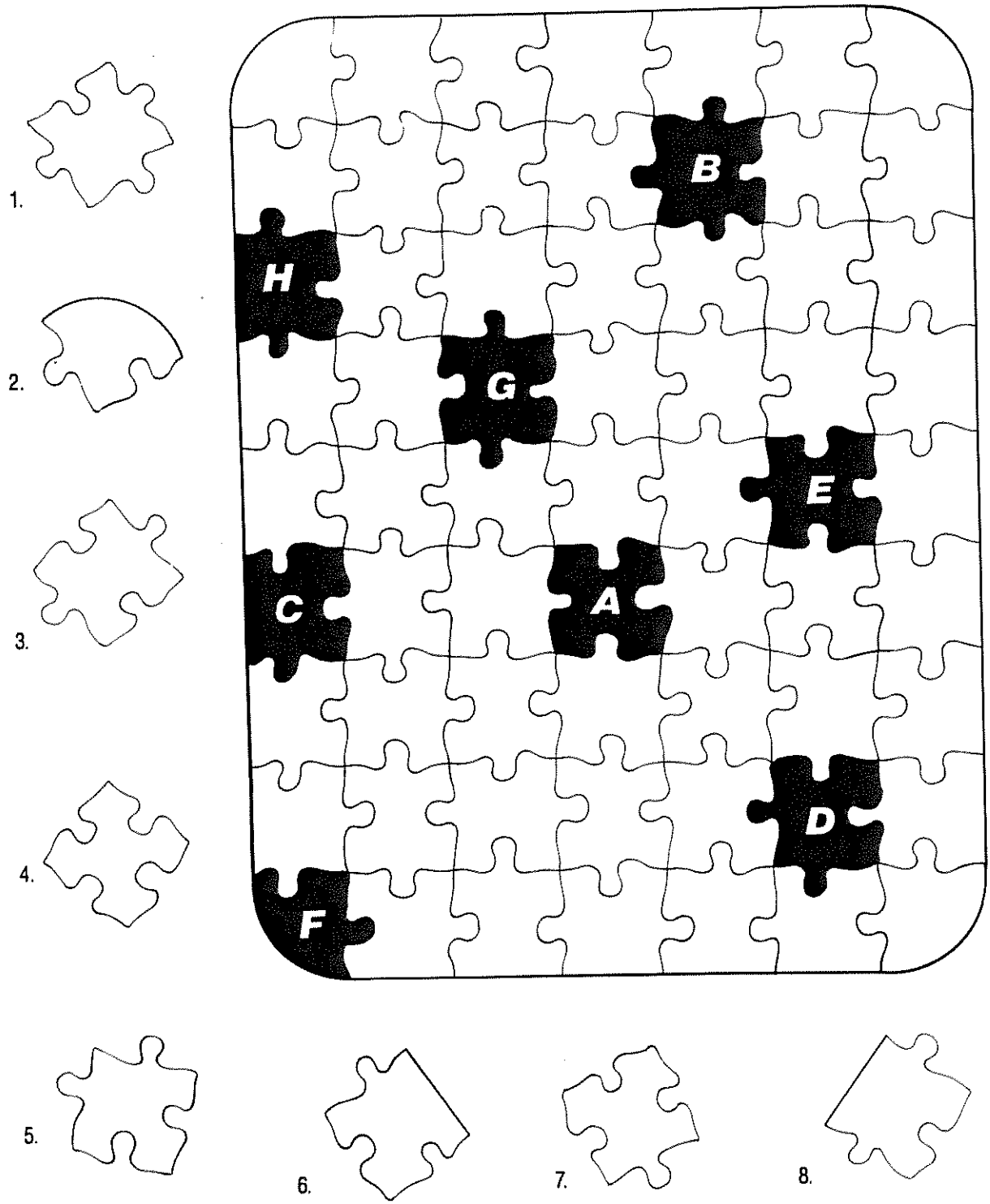
- (N) Which is greater, 2 or −13?
- (T) Which is greater, −7 or −6?
- (E) Which is greater, −11 or 9?
- (C) Which is less, −18 or −4?
- (U) Which is less, $|-20|$ or 19?
- (H) Which is less, 0 or $-(-3)$?

The table below gives the starting point, direction, and length of arrows drawn on the number line. Complete the table by writing the endpoint of each arrow.

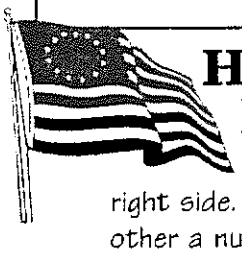
Starting Point	Direction, Length	Endpoint
0	negative, 4	(M)
−2	positive, 9	(Y)
−2	negative, 9	(L)
5	positive 13	(F)
−10	positive, 23	(V)

LETTER PUZZLE (I)

Compare the puzzle pieces with the lettered ones in the puzzle.
Write the correct letter on each piece.



PARTNER A (left side)	TEAM NAME	PARNTER B (right side)



How Did Betsy Ross Know What Colors People Really Wanted for the New National Banner?

Simplify each expression. Partner A should do the left side and Partner B the right side. After completing each set, find matching answers. One will have a letter and the other a number. Write the letter in the matching numbered box at the bottom of the page.

SET 1	SET 1
O. $2y + 5(x + 4) + 6x$	**15.** $3y + 4(x + 2) + 8x$
L. $9x + 8 + 3(x + y)$	**3.** $3x + 10 + 7(x + y)$
A. $10 + 3(2 + x) + 12(x + y)$	**5.** $11 + 9(1 + x) + 2(x + y)$
E. $4(x + y) + y + 2(y + 5) + 6x$	**8.** $3(x + y) + y + 8(y + 2) + 12x$
SET 2	**SET 2**
O. $4n^2 + 7n + 5n^2 + 9n + 8$	**7.** $8n^2 + 4n + 2n^2 + 9n + 10$
A. $6n^2 + n + 15 + 3n^2 + 12n + 5$	**1.** $3n^2 + n + 4 + 7n^2 + 9n + 5$
K. $10 + 3n + n^2 + 8n + 9n^2 + 2n$	**11.** $20 + 8n + n^2 + 3n + 8n^2 + 2n$
S. $5n + 8 + 4n^2 + 4n + 1 + 6n^2 + n$	**14.** $10n + 7 + 5n^2 + 5n + 1 + 4n^2 + n$
SET 3	**SET 3**
F. $5(2w + 3) + 6w$	**2.** $7(3w + 4) + 9w$
O. $w + 4(7w + 1) + 24$	**9.** $w + 3(5w + 1) + 12$
H. $2(6w + 5) + 9(2w + 2)$	**16.** $9(2w + 8) + 4(3w + 5)$
L. $10(8 + w) + 11w + 3(4 + 3w)$	**6.** $6(3 + w) + 3w + 5(4w + 2)$
SET 4	**SET 4**
G. $9a^3 + 2a^2 + 6a + 7a^2 + a$	**10.** $8a^3 + 3a^2 + 7a + 2a^2 + a$
T. $5a^2 + 9ab + 4b^2 + 5a^2 + b^2$	**13.** $4a^2 + 9ab + 6b^2 + 4a^2 + b^2$
L. $6a^3 + a^2 + 5a + 2a^3 + 4a^2 + 3a$	**12.** $2a^3 + a^2 + 5a + 7a^3 + 8a^2 + 2a$
P. $2a^2 + 8ab + 3b^2 + 6a^2 + ab + 4b^2$	**4.** $3a^2 + 8ab + 3b^2 + 7a^2 + ab + 2b^2$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Number Challenge!

Directions: Use the numbers 0 – 9 in the blanks to make the equations true.

You may only use each number once!!

1. $10 \div \square + \square - 3 = 1$

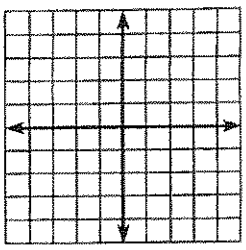
2. $\square \div 3 + 7 - \square = 6$

3. $16 \div 2 + \square - 6 = \square$

4. $12 \div \square + 3 - 5 = \square$

5. $\square \div 4 + 9 - \square = 4$

Why Was the Baby Ant Confused?



Fill in each blank with one of the choices to the right. The circled letter to the left of each blank goes in the box containing the number of the answer.

The Coordinate Plane

(F) The _____ plane has two number lines that intersect
(L) at a point called the _____. The horizontal number
(T) line is called the _____. The vertical number line is
(W) called the _____. The two axes divide the coordinate
(I) plane into four parts called _____. The location of a
(E) point in the coordinate plane is given using an _____
(A) of numbers. The first number is the _____. The
(S) second number is the _____. Label the origin, axes, and quadrants in the figure at the top of the answer column.

15. origin
1. x-coordinate
23. intercept
9. quadrants
6. coordinate
17. y-coordinate
26. x-axis
22. ordered pair
7. graph
19. y-axis

Equations in Two Variables

For an equation with two variables, x and y, a pair of values
(N) (x,y) that make the equation true is a called a _____
(L) of the equation. Each solution is an _____. The
(S) value of x is written _____; the value of y is written
(A) _____. Each solution can be represented as a
(O) _____ in the coordinate plane. The set of all points
(E) representing solutions is called the _____ of the
(S) equation. An equation in two variables has an _____ number of solutions, so there is an infinite number of
(L) _____ in the graph.

24. second
11. slope
27. infinite
10. first
5. point
13. solution
2. points
18. number
3. ordered pair
16. graph

Linear Equations in Two Variables

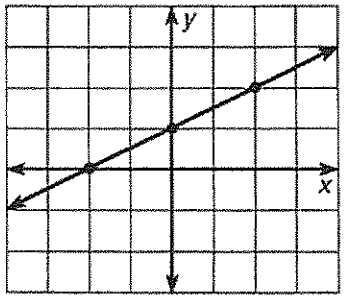
If the graph of an equation in two variables is a straight line,
(E) the equation is a _____ equation. Every solution
(H) can be represented by a _____ on the line. For example, the equation $y = 2x + 5$ is a linear equation because
(U) its graph is a _____. One solution of this equation is
(R) _____. $2x + 3y = 90$ is a linear equation because its
(N) _____ is a line. In a linear equation, the highest
(C) power of either variable is the _____ power.

21. (3,11)
8. point
23. (5,12)
12. line
14. first
4. intercept
20. linear
25. graph

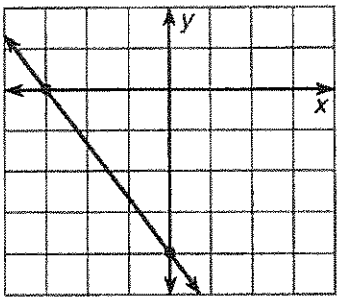
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Slopes and Intercepts

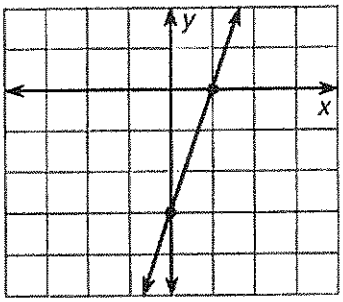
Find the slope and intercepts for each line.



1. slope _____
2. x-intercept _____
3. y-intercept _____

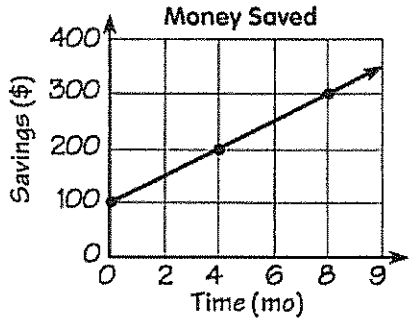


4. slope _____
5. x-intercept _____
6. y-intercept _____

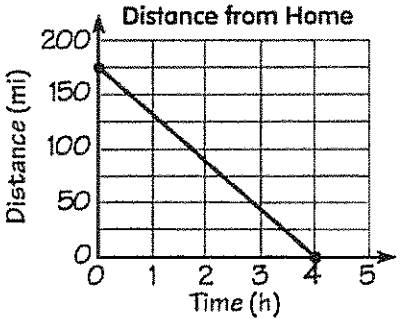


7. slope _____
8. x-intercept _____
9. y-intercept _____

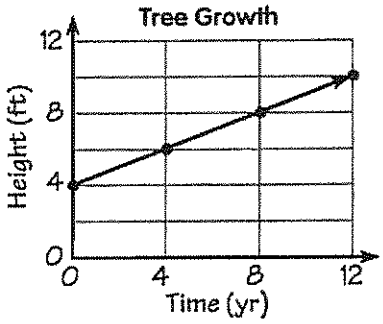
Answer the questions for each graph. Be sure to include a unit of measurement with each answer.



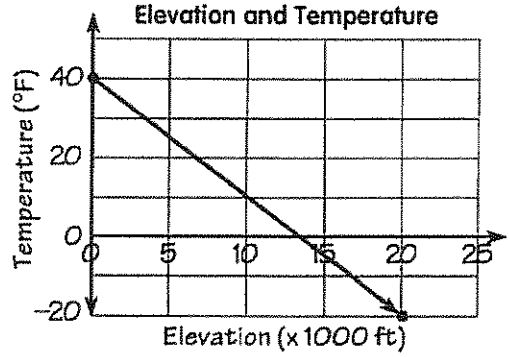
10. How much money had been saved at time 0?
11. What was the rate of saving ($/mo)?



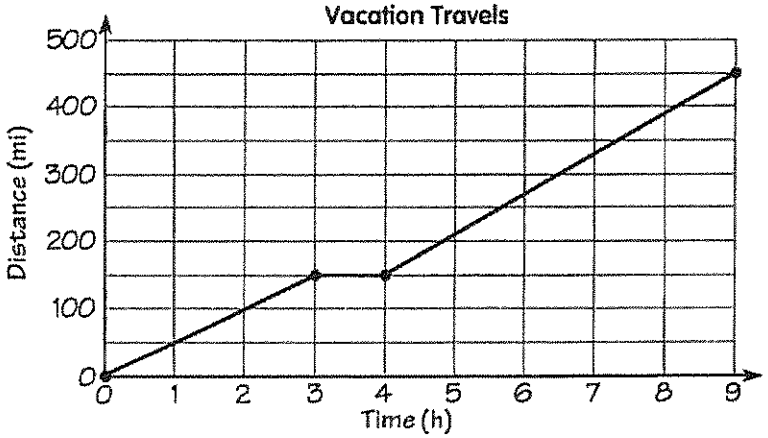
12. What was the distance from home at time 0?
13. What was the rate of speed (mph)?



14. What was the height of the tree at time 0?
15. What was the rate of growth (ft/yr)?



16. What was the temperature at sea level? At 20,000 ft?
17. At what rate did the temperature change (°F/1000 ft)?
18. At about what elevation was the temperature 0°F?
19. What would the temperature be outside a jet flying at 40,000 ft?



20. What was the rate of speed from 0 to 3 h?
21. What was the rate of speed from 3 to 4 h?
22. What was the rate of speed from 4 to 9 h?
23. What was the overall average rate of speed (total distance divided by total time)?