

NAME \_







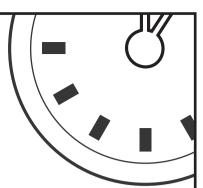
### MINUTE JOURNAL

MINUTE	DATE	Score									
1			26			51			76		
2			27			52			77		
3			28			53			78		
4			29			54			79		
5			30			55			80		
6			31			56			81		
7			32			57			82		
8			33			58			83		
9			34			59			84		
10			35			60			85		
11			36			61			86		
12			37			62			87		
13			38			63			88		
14			39			64			89		
15			40			65			90		
16			41			66			91		
17			42			67			92		
18			43			68			93		
19			44			69			94		
20			45			20			95		
21			46			21			96		
22			47			72			97		
23			48			23			98		
24			49			74			99		





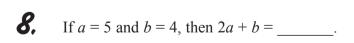


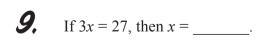


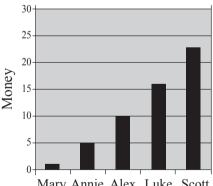
- Simplify: 12(2 + 7 + 1) =
- $\frac{3}{10} \cdot \frac{7}{10} =$
- Circle all of the following equal to  $\frac{2}{5}$ : 0.4  $\frac{4}{100}$  40%
- 10 | = 5
- 5. Cross out the three-dimensional shape.
- 6. Each side of the regular pentagon is 5 centimeters. What is the perimeter? \_\_\_\_\_



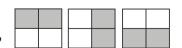
In the graph, Alex has \_\_\_\_\_ times as much money as Annie.





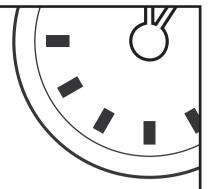


- Mary Annie Alex Luke Scott
- 10. Which of the following shapes comes next in the pattern?









- $\frac{12}{2} \cdot \frac{1}{3} =$
- **2.** Use the correct symbol (=, >, or <) to complete:  $\frac{3}{10} + \frac{7}{10}$   $\frac{3}{10} \cdot \frac{7}{10}$
- **3.** Which of the following does not belong? Circle your answer.

Two-tenths

0.2

20%


4. The distance between two cities would most likely be measured in:

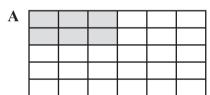
a. feet

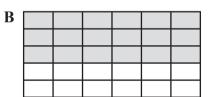
**b.** inches

**c.** yards

d. miles

**5.** The shaded area in figure B is \_\_\_\_\_ times greater than the shaded area in figure A.

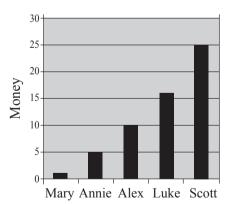




**6.** The perimeter around the shaded area in figure A in Problem 5 is \_\_\_\_\_ units.

9

**7.** In the graph, \_\_\_\_\_ has five times as much money as \_\_\_\_\_.



For Problems 8–10, evaluate if a = 4, b = 6, and c = 2.

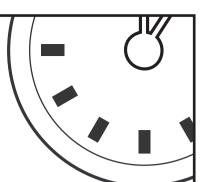
$$\mathbf{g}, \qquad \frac{a+b}{c} =$$

10. 
$$b^2$$









$$2\left[\frac{30}{5}\right] =$$

**2.** 
$$\left(\frac{1}{4}\right)\left(\frac{1}{3}\right) =$$

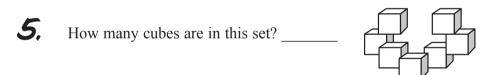
3. Which of these represents the greatest amount?

Circle: 62%

0.58



Use  $\bullet$ , +, -, or  $\div$  to complete the following equation. 2

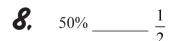


6. The distance around the world at the equator is about 42,000 **b.** kilometers d. millimeters a. meters c. centimeters

10



For Problems 8–10, use >, <, or =.

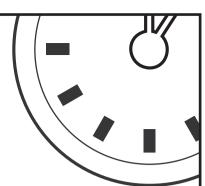


0.5 \_\_\_\_\_ 0.5

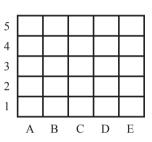




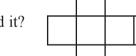




- $0.7 \times 8 =$
- **2.** 576 ÷ 10 =
- 3. If  $\frac{2}{5} + \frac{x}{5} = \frac{7}{5}$ , then x =\_\_\_\_\_.
- 4. If  $\left[\frac{3}{8}\right] \cdot \left[\frac{a}{2}\right] = \frac{15}{16}$ , then  $a = \underline{\phantom{a}}$ .
- **5.** In the graph, shade column A and put an *X* in E4.



**6.** What shape would the net to the right create if you folded it?

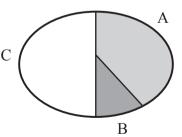


a.

b.

c.

- d.
- About what percent of the graph does region A represent?
  - **a.** 50%
- **b.** 90%
- **c.** 10%
- **d.** 33%



### For Problems 8–10, estimate to find the best answer.

- **8.** 19 out of 80:
  - **a.** 10%
- **b.** 40%
- **c.** 25%
- **d.** 75%

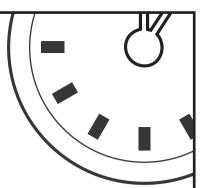
- **9**% of 55:
  - **a.** 50
- **b.** 30
- **c.** 20
- **d.** 5

- 10.
- 194% of 40:
- a. 225
- **b.** 75
- **c.** 40
- **d.** 30









$$0.5 \times 0.9 =$$

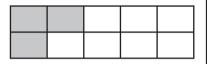
$$3+2 \cdot 4+5=$$

**3.** Which of these represents the least amount?

Circle: 0.35

 $\frac{12}{50}$ 

25%



**4.** Fill in the remaining prime numbers that are less than 20.

 $\exists$ 

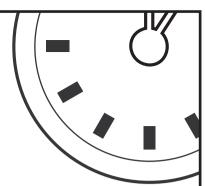
2 7 13

- **5.** Shade row 3 and column C.
- 4 3 2 1 A B C D F
- 6. At what point does the row and column shaded in Problem 5 intersect?
- In 1933, Wiley Post flew around the world in 7 days, 18 hours. Wiley's trip would best be described as flying around the \_\_\_\_\_ of the earth.
  - a. perimeter
- **b.** area
- c. volume
- **d.** diameter
- 8. Find the number that completes the following problem.  $2 \frac{2}{\times 8}$
- **9.** Find the number that completes the following problem.  $(3+5)+2=2(\boxed{\phantom{0}}+2)$
- **10.** If  $3 \times 3 \times 3 \times 3 = 3^x$ , then x =\_\_\_\_\_.







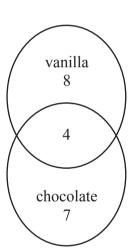


- 0.3 + 0.5 + 0.8 =
- $2 (2 + 0.4 + 0.6)^2 =$
- **3.** Fill in the remaining positive factors of 18.

1	3	6	18

For Problems 4-6, use the Venn diagram to the right.

- **4.** \_\_\_\_\_ people liked vanilla only.
- **5.** \_\_\_\_\_ people liked chocolate only.
- **6.** people liked both.



For Problems 7–10, circle *True* or *False*.

 $\frac{8}{8} > \frac{12}{12}$ 

True or False

**8.**  $\frac{12}{50} = \frac{6}{25}$ 

True or False

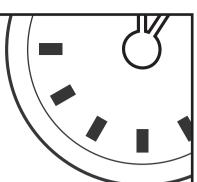
**9.**  $2.2 > 2.0\overline{9}$ 

- True or False
- **10.**  $8.15 = 8 + \frac{1}{10} + \frac{5}{100}$
- True or False









- $(0.6)^2 =$
- **2.** If  $\left[\frac{2}{5}\right]^2 = \left[\frac{x}{25}\right]$ , then x =\_\_\_\_\_.
- **3.** Circle the greatest number. Cross out the least number.
  - $\frac{78}{100}$
- $\frac{3}{4}$



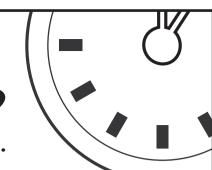
- 50%
- Circle the numbers that are multiples of 7.21 14 1 17 35
- **5.** Circle the figure that is congruent to .
  - a. []
- b. [ ]
- c. \_\_\_\_\_
- d. []
- 6. What is the perimeter of this figure? \_\_\_\_\_\_ 10 cm 8 cm
- **7.** Is the area of the figure in Problem 6 greater than or less than 80 cm<sup>2</sup>?

14

- **8.** Find the number that completes the following problem.  $42 \times 6 = 2,538$
- **9.** If y = x + 5 and x = 3, then  $y = ____.$
- **10.** If y = x + 5 and y = 11, then x =.







Circle all of the following that are between 10 and 40.

 $4^2$   $5^2$   $6^2$ 

2. What is the value of the underlined digit in the number 328.06?

**a.**  $\frac{6}{10}$  **b.**  $\frac{6}{100}$  **c.**  $\frac{6}{1,000}$  **d.**  $\frac{6}{10,000}$ 

- $\left[\frac{1}{2}\right]\left[\frac{2}{3}\right]\left[\frac{3}{4}\right] =$
- Circle the fractions that reduce to  $\frac{1}{4}$ :  $\frac{2}{8}$   $\frac{4}{12}$   $\frac{3}{12}$
- 5. In about how many seconds could a 9-year-old boy run 100 meters?

**a.** 5 sec.

**b.** 10 sec.

**c.** 20 sec.

15

6. How many cubes are shown? \_\_\_\_\_



MARK'S COMPANY

Based on this graph, is Mark's company doing well?

- 8. Look for the pattern between rows A and B and complete the grid.

A	2	5	7	12
В	5	8	10	

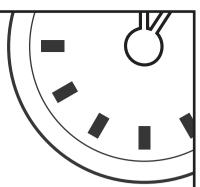
For Problems 9–10, evaluate if a = 5, b = 3, and c = 2.

- 2ab =
- **10.**  $\left[\frac{6}{b}\right]^c =$









**Basketball Players** 

Jack Tom Kyle Ed Doug

18-16 14

12

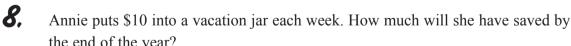
10

- Use the numbers 3, 4, and 5 to complete the math sentence.

- Find the next number in the following sequence:  $\frac{1}{12}$ ,  $\frac{3}{12}$ ,  $\frac{5}{12}$ , ......
- What is 10% of 300?
- How many minutes are in 3 hours and 10 minutes?

For Problems 5–7, use the graph to the right.

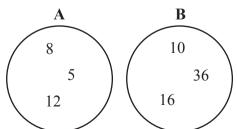
- 5. Which two players scored the same number of points? \_\_\_\_\_
- 6. Ed scored twice as many points as Tom. Circle: True or False
- How many total points were scored by the players?



the end of the year? \_\_\_\_\_

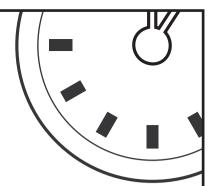
For Problems 9-10, use the diagram to the right.

- 9. Draw arrows to connect the multiples between circles A and B.
- 10. Circle the numbers in the diagrams that are evenly divisible by 4.









For Problems 1–3, circle *True* or *False*.

$$2 \times 6 \times 3 \times 0 \times 4 > 12 \times 1 \times 1$$

True or False

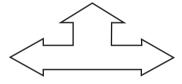
$$\sqrt{16} = 4$$

True or False

$$3^3 = 6$$

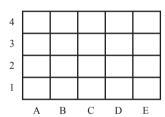
True or False

- 4. Circle each of the following that are whole numbers:  $\frac{12}{2}$   $\frac{2}{12}$   $\frac{8}{8}$   $2^2$   $\left[\frac{1}{2}\right]^2$
- **5.** What is  $\frac{1}{2}$  of  $\frac{3}{4}$ ?\_\_\_\_\_
- **6.** Draw the line of symmetry on the figure to the right.



- Maps often show north as pointing toward the top of the page.

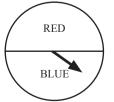
  If you went from A2 to E3, in which direction would you be going?
  - a. NE
  - **b.** NW
  - c. SE
  - d. SW



17

For Problems 8–10, use the spinners to the right.

**8.** How many possible results could occur if both spinners are spun?



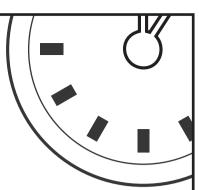


- **9.** What are the chances of spinning red and 3?
- **10.** What are the chances of spinning blue and an odd number?



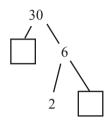






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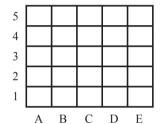
Complete the following factor tree.



**2.** 3(4+6) – 10 =

For Problems 3–4, use the table to the right.

**3.** Which square does not touch one of the perimeter squares? \_\_\_\_\_



**4.** What is the combined area of rows 4 and 5?

For Problems 5–8, round to the underlined digit. (Note: "\approx" means "approximately")

- **5.** 2<u>7</u>.38 ≈ \_\_\_\_\_
- **6.** <u>2</u>.99 ≈ \_\_\_\_\_
- **7.** 3.1<u>6</u>7 ≈
- **8.** 1,001.<u>4</u>5 ≈

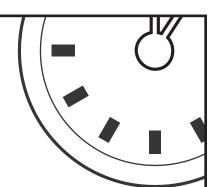
For Problems 9–10, use a = 10 and b = 2.

- $\boldsymbol{g}$ . The product of a and b is \_\_\_\_\_.
- **10.** Three more than twice b is \_\_\_\_\_.









$$\frac{5}{4} - \frac{1}{2} =$$

**2.** If 
$$\frac{3}{8} \div \frac{2}{3} = \frac{3}{8} \cdot \frac{3}{x}$$
, then  $x = \underline{\hspace{1cm}}$ .

- - $(-4)^2 = (-4)(-4)$  Circle: True or False

- 5. Which of the following could be the area of a room?
  - **a.**  $18 \text{ m}^3$
- **b.** 50 ft.
- **c.**  $29 \text{ m}^2$
- Which answer choice in Problem 5 could be the perimeter of a room? \_\_\_\_\_
- 7. Draw two lines in the following trapezoid to create three equilateral triangles.

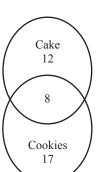


8. What shape would the net to the right create if you folded it?



- d.

19



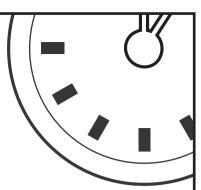
For Problems 9-10, use the Venn diagram to the right.

- 9. How many kids like cookies only? \_\_\_\_\_
- 10. How many kids like both cookies and cake?









- $(9-3 \cdot 2)^2 =$
- $205 \times 0.01 =$
- Rewrite using bar notation: 0.912912... =
- Which of the following is the remainder of 14 divided by 3?
  - **a.** 4

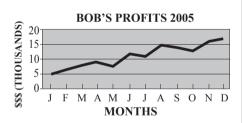
**b.** 1

- **c.** 5
- **d.** 2
- 5. Fill in the remaining prime numbers between 20 and 50.

23	29			41		47
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### For Problems 6-7, use the graph to the right.

- 6. Would it be a good idea to invest in Bob's company? Circle: Yes or No
- 7. In the graph, what does the "F" stand for?



### For Problems 8–10, estimate to find the best answer.

- 8. 24 out of 99:
  - **a.** 10%
- **b.** 75%
- **c.** 25%
- **d.** 50%

- 12% of 400:
  - **a.** 15
- **b.** 40

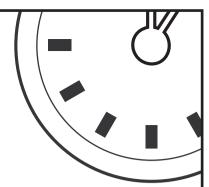
- **c.** 60
- **d.** 80

- 10. Possible weight of a 7th grader:
  - a. 50 kilograms
- **b.** 50 grams
- c. 50 milligrams





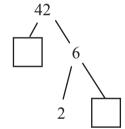




- 1. If  $24 = 3 \cdot 2^x$ , then x =\_\_\_\_\_.
- **2.** If  $\frac{3}{5} = \frac{x}{15}$ , then x =\_\_\_\_\_.
- **3.** Find the remaining multiples of 7 that are less than 50.

7	21	28		49

**4.** Complete the factor tree.



**5.** Use the digits 5, 7, and 2 to write four numbers that are greater than 400.

For Problems 6–10, match each math expression with its equivalent expression.

**6.**  $a \div 2$ 

**a.** *a* • *a* 

**7.** a•2

**b.** 3*a* 

**8.** a<sup>2</sup>

**c.** 0

 $\mathbf{g}$ , a+a+a

**d.**  $\frac{a}{2}$ 

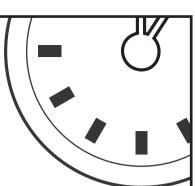
**10.** 0a

**e.** 2*a* 









$$\frac{6}{0.5}$$
 =

- **2.** What is the remainder of 21 divided by 4? \_\_\_\_\_
- 3. Is  $\sqrt{47}$  closer to 6 or 7? \_\_\_\_\_
- **4.** Place ( ) symbols in this problem to make a true statement:  $4 + 5 \cdot 2 = 18$
- **5.**  $1.435 \times 10^2 = 143.5$  Circle: True or False
- 6. If  $5.48 = 5 + \frac{a}{10} + \frac{8}{b}$ , then  $a = \underline{\hspace{1cm}}$  and  $b = \underline{\hspace{1cm}}$ .
- Half of a circle is a \_\_\_\_\_.
  - a. square
- **b.** triangle
- c. diamond
- d. semicircle
- **8.** Shade the figure with the fewest vertices. Cross out the figure with the most vertices.

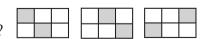




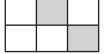




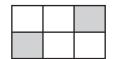
- **9.** If it is 4 o'clock now, what time will it be in 9 hours?
- **10.** Which one of the following shapes comes next in the pattern?



a.

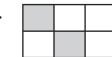


b.



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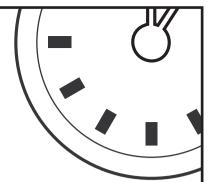
c.











- **1.** Circle the greatest number. Cross out the least number.
  - 3.03
- 3.3
- 3.003
- 0.3
- 0.33
- **2.** Circle the number that is divisible by 4: 45 38 32 30
- **3.** What is the value of the underlined digit in 478.6?
  - **a.** 7
- **b.** 70
- **c.** 700
- **d.** 7,000

- **4.** 24 = 6
- **5.** Fill in the missing numbers in the table.

Sum	Product	Numbers
7	12	3 and 4
10	16	and

**6.** Shade the hexagon.







23



**7.** Draw a horizontal line of symmetry through the shape.

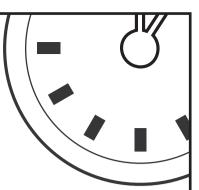


- For Problems 8–10, use >, <, or = .
  - **8.**  $\frac{3}{10}$  \_\_\_\_\_ 0.3
  - **9.** 0.4 0.4
- **10.** 100% of 50 \_\_\_\_\_ 10% of 600









- In a math problem, which of the following should be done first?
  - a. parentheses ()
- **b.** exponents
- c. multiplication
- **d.** addition
- **2.** In a math problem, which of the following should be done last?
  - **a.** parentheses ( )
- **b.** exponents
- c. multiplication
- d. addition

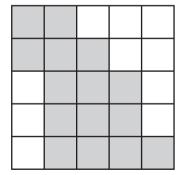
- $3. \quad 4\frac{1}{4} + 3\frac{2}{4} =$
- **4.** 576 ÷ 10 =
- **5.** Which of these shapes is congruent to



- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c.
- d.

### For Problems 6–8, use the grid to the right.

- **6.** What is the area of the shaded region?
- **?.** What fraction of the squares in the grid are shaded? \_\_\_\_\_
- **&.** What percent of the boxes in the grid are shaded? \_\_\_\_\_

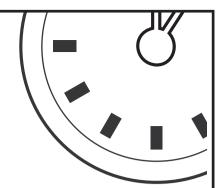


- **9.** If  $\frac{15}{25} = \frac{x}{100}$ , then x =\_\_\_\_\_.
- 10. If 60% of a shape is shaded, what percent is NOT shaded? \_\_\_\_\_







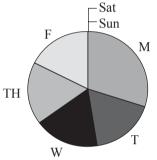


Fill in the missing fraction:  $\frac{1}{10}$ ,  $\frac{3}{10}$ ,  $\frac{5}{10}$ ,  $\frac{9}{10}$ 

For Problems 2–5, use the graph to the right.

- 2. On which day of the week did Mark work the most hours?
- **3.** On which two days of the week does it appear that Mark did not work at all?





- 4. Is it possible to tell how many total hours Mark worked during this particular week? Circle: Yes or No
- **5.** On Tuesday, Wednesday, and Friday, Mark performed about \_\_\_\_\_\_% of his total work for the week.
- 6. Write the next "A" in this pattern:
- **?.** Fill in the missing numbers in the table.

Sum	Product	Numbers
5	6	2 and 3
12	32	and

- **8.** Which of the following does NOT mean a times b?
  - **a.** *ab*
- **b.** *a b*
- $\mathbf{c.} \ a \times b$
- d.  $\frac{a}{b}$
- **9.** Which of the following does NOT mean to divide?
  - a. quotient
- **b.**  $a \div b$
- c. ah

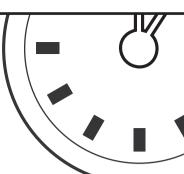
25

- **d.**  $\frac{a}{b}$
- **10.** If  $\frac{1}{5} \div \frac{2}{3} = \frac{1}{5} \cdot \frac{x}{2}$ , then x =\_\_\_\_\_.

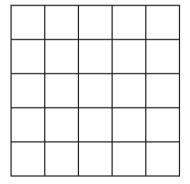








- MINUTE 19
- **2.** Round  $3.\overline{28}$  to the nearest thousandth.
- **3.** If Carol can read 45 pages in one hour, how many pages can she read in four hours?
- 4.  $4 \cdot 5 3(4) =$
- **5.** Shade 20% of the squares in this box.



6. If you double the sum of 5 and the number \_\_\_\_\_, you will get 16.

For Problems 7–10, evaluate if x = 3, y = 4, and z = 5.

**7.** 
$$6(x+y) =$$

8. 
$$\frac{2}{7-x} =$$

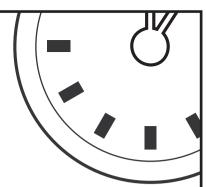
**9.** 
$$2x + 2y =$$

**10.** 
$$\frac{1}{2}yz =$$

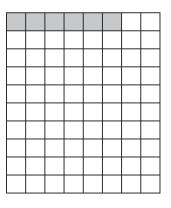




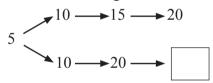




- $18 5 \cdot 3 =$
- (9+4)(10-8) =
- 3. Is  $\sqrt{34}$  closer to 5 or 6? \_\_\_\_\_
- **4.** If q 3.1 = 4.6, then q =\_\_\_\_\_.
- **5.** Shade 15% of the box. (**Hint:** 7.5% is already shaded for you.)

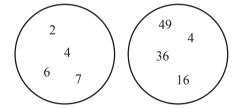


**6.** Fill in the missing number in the box.



For Problems 7–9, use the Venn diagram to the right.

**?.** Draw arrows to connect the square roots.



B

- **8.** To which circle would the number 5 belong? \_\_\_\_\_
- **9.** The sum of the numbers in circle A is a prime number. Circle: True or False

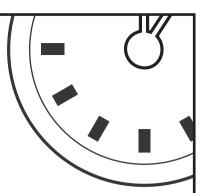
27

**10.** If 1 km = 1,000 meters, then  $2\frac{1}{2}$  km = \_\_\_\_\_ meters.









For Problems 1–3, circle *True* or *False*.

$$25 \div 5 \cdot 3 = 15$$

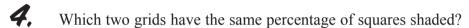
True or False

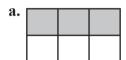
$$2(10-7)-4=9$$

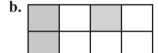
True False

$$3. \quad 16 + 24 \div 8 - 5 = 14$$

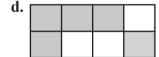
True or False



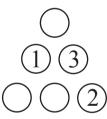






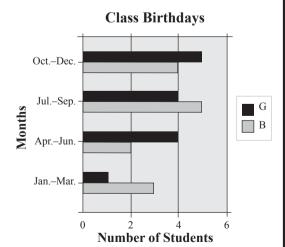


5. Use the numbers 4, 5, and 6 to fill in the circles so that each side equals 11.



For Problems 6–9, use the graph to the right.

- How many birthdays were in Jan.–Mar.?
- Were there more boy or girl birthdays in Oct.-Dec.?
- How many girls are in the class?
- 9. How many boys are in the class?



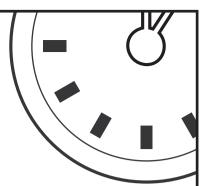
Write the next "A" in this pattern: 10.





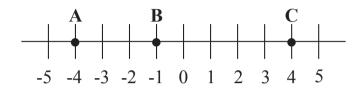








- $\frac{8}{0.5} =$
- Which numbers are identified by points A, B, and C on the number line?



- 3. Order the numbers {10, -7, 8, 0} from least to greatest.
- **4.**  $\frac{3}{7} \div \frac{4}{7} =$

- DifferenceProductNumbers561 and 6640and
- **5.** Fill in the missing numbers in the table.
- 6. Which shape would the net to the right create if you folded it?





c.







For Problems 7–10, use >, <, or = if a = 2, b = 4, and c = 5.



R

9.

$$2c-2b$$

10.

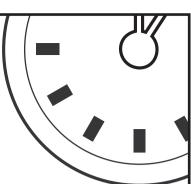
$$2(a + b)$$

$$2a + 2b$$









For Problems 1–3, use the grid to the right.

- 1. Circle three consecutive numbers that have a sum of 12.
- **2.** Shade the prime numbers that are greater than 3.
- Shade the prime numbers that are greater than 3

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

- Cross out the number that has 2 and 3 as factors.
- **4.** If  $\frac{d}{7} = 8$ , then d =\_\_\_\_\_.
- **5.** Draw a radius in the circle to the right.



- 6. If the radius of a circle is 6 cm, the diameter is \_\_\_\_\_ cm.
- **7.** Draw a vertical line of symmetry on the star.

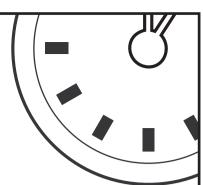


- **8.** TON is to NOT as 356 is to \_\_\_\_\_.
  - **a.** 536
- **b.** 635
- **c.** 635
- **d.** 653
- **9.** If you double a number and add 1, you get 11. What is the number? \_\_\_\_\_
- **10.** If y = 2x 4 and x = 12, then y =\_\_\_\_\_.









$$[1+(7-2)]^2 =$$

**2.** If 
$$a = 3.6$$
 and  $b = 10$ , then  $ab =$ \_\_\_\_.

**3.** Write thirty-eight thousandths as a decimal.

For Problems 4–7, use the calendar to the right.

- **4.** What day of the week is March 18?
- MARCH

S	M	T	W	T	F	S
				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	20	20	20	21

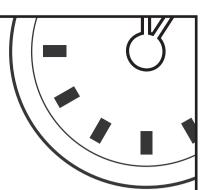
- **5.** Circle the date that is three weeks after March 2.
- 6. Put an "X" on the numbers that are perfect squares. 25 26 27 28 29 30 31
- **?.** Shade the date that is 15 days before March 26.
- **8.** Round 2,561 to the nearest hundred.
- **9.** 2.5 meters > 220 cm Circle: True or False
- A coin is tossed three times and lands heads, tails, and tails. The next flip will be: **a.** heads **b.** tails **c.** unknown

31









**2.** If 
$$38,433 = 3.8433 \times 10 m$$
, then  $m = ____.$ 

$$3, 1+(2)(3)(4)=$$

For Problems 4–6, use the grid to the right.

A	
4.	Shade the multiples of 7.

**5.** Circle the number in the 2nd row, 2nd column.

7	9	14	27
2	13	3	28
11	7	15	35
14	18	21	20

- **6.** What is the sum of the numbers in the first column? \_\_\_\_\_
- **?.** What is the total price of a \$5 book with a 10% sales tax? \_\_\_\_\_

**8.** If 
$$b^2 = 25$$
, then  $b =$ .

**9.** Circle the expression that shows 15 divided by a number.

**b.** 
$$15 - n$$

**c.** 
$$15 + n$$

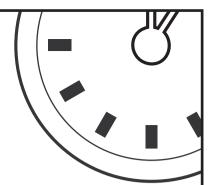
**d.** 
$$\frac{15}{n}$$

**10.** RAT is to TAR as 246 is to \_\_\_\_\_.





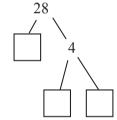




$$\frac{1}{11} + \frac{6}{11} - \frac{2}{11} =$$

- **2.** When you divide fractions you should \_\_\_\_\_.
  - a. invert the first fraction and then multiply
  - **b.** invert the first fraction and then divide
  - c. invert the second fraction and then multiply
  - d. invert the second fraction and then divide

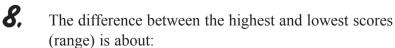




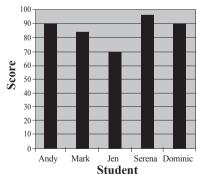
6. If you multiply the numbers in the three empty boxes in Problem 5 together, what do you get?

### For Problems 7–9, use the chart to the right.

**?.** Who had the highest test score on the Chapter 5 test?







CH. 5 TEST

- (range) is about: **a.** 40 **b.** 25 **c.** 10 **d.** 15
- **9.** Which one of the following is a reasonable average score (mean)?
  - **a.** 95
- **b.** 60
- **c.** 70
- **d.** 85

33

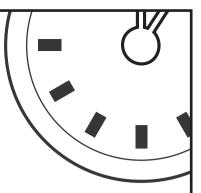
False

**10.** 
$$6^2 - 8 = 28$$
 Circle: True or









- **2.** Reduce:  $\frac{10}{40}$  =
- 3. Circle the numerator and put a box around the denominator:  $\frac{4}{15}$
- **4.** There are two pictures on a wall. One is 12 in.  $\times$  4 in. and one is 9 in.  $\times$  6 in. Which one is larger?
- **5.** To find the area of a shape, multiply the length by the width by the height. Circle: True or False
- 6. How many quarters are in eight dollars?
- Which of these could be the length of a bandage?a. 3 inchesb. 3 metersc. 3 millimetersd. 3 kilometers

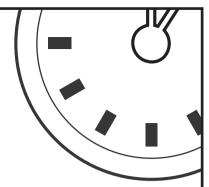
For Problems 8–10, use >, <, or = .

- **8.** 10% of 200 \_\_\_\_\_ 50% of 100
- **9.** 1<sup>99</sup> \_\_\_\_\_ 0.9
- **10.**  $\sqrt{51}$  \_\_\_\_\_7









- $4 \bullet 10 + 12 =$
- $5 + 68 \div 4 =$
- Find the perimeter of the parallelogram.

	3.1 cm	
		7
		/ 2 cm
/		/

4. Complete the chart.

3	3
3 <sup>2</sup>	3.3
33	3.3.3
	3.3.3.3
3 <sup>5</sup>	

- 5. Circle all of the following that represent a form of multiplication.
  - хy
- x(y)
- (x)(y)
- $x \div y$
- $x \bullet y$

- 6. The area and perimeter of the square to the right have the Circle: True or False same numerical value.

- Circle the better deal:
- Ten donuts for \$2
- Two dozen donuts for \$6
- 8. To simplify  $4 \cdot 3 - 3^2 + 1 \cdot 8$ , which operation should be done first?
  - **a.** 4 3
- **b.**  $3^2 + 1$
- **c.** 3<sup>2</sup>
- **d.** 1 8

9. Draw a horizontal line of symmetry.



10. What is the pattern of these shapes?



2nd

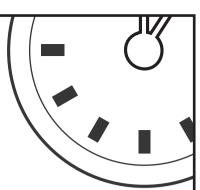












$$0.35 + 0.4 + 0.1 =$$

$$0.2 \times 0.3 =$$

4. How many dots would the next shape in the sequence have? \_\_\_\_\_

0 00

5. 
$$192 + 206 \approx$$
 \_\_\_\_\_. (Hint: " $\approx$ " means "approximately")  
a. 500 b. 300 c. 200 d. 400

For Problems 6-10, match the words with their correct algebraic expression.

**6.** nine divided by n plus two

**a.** 4*n* 

8.4 cm

*n* plus nine squared

**b.**  $\frac{4}{n-9}$ 

**8.** four times the sum of nine plus n

c.  $\frac{9}{n} + 2$ 

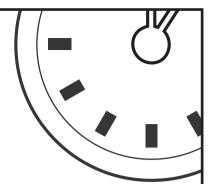
 $\mathbf{g}$  the product of four and n

- **d.** 4(9+n)
- **10.** four divided by the difference of n and nine
- **e.**  $n + 9^2$









- Laurie says that  $2 + 3 \times 2 + 3 = 13$ . Ray says that  $2 + 3 \times 2 + 3 = 11$ . Who is correct?
- The first step in simplifying 400 5(12 + 13) would be to \_\_\_\_\_.
  a. add
  b. subtract
  c. multiply
  d. divide
- 3. Insert parenthesis ( ) to make the following problem true:  $3 + 6 2 \cdot 4 = 19$
- **4.** Does a = 4 solve the equation 5a 3 = 17? Circle: Yes or No
- 5. In the grid to the right, circle a diagonal sum that equals 15.

  (Hint: Look for three numbers.)

  4 2
  9 6
- 4
   2
   7
   8

   9
   6
   4
   4

   3
   5
   5
   1

   2
   8
   3
   8
- Circle all the numbers that make the inequality a + 2 < 7 true. 2 3 4 5 6 7
- 7. If  $x + \frac{2}{2} = \frac{5}{2}$ , then x =\_\_\_\_\_.

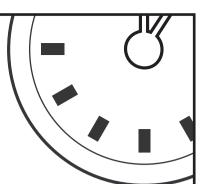
For Problems 8–10, shade the box with the correct equivalent.

- **8.** 1 mile = 5,280 feet 454 grams 2.54 inches 1 kilometer
- **9.** 1 ton = 16 ounces 2,000 pounds 454 grams 1,000 milligrams
- **10.** 1 gallon = 2 cups 1 liter 1,000 milliliters 4 quarts

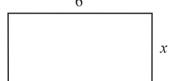






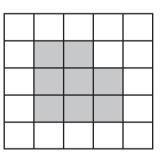


- 7. Fill in the missing numbers. 9.36 +1.0 0.41
- **2.**  $21 \cdot \frac{1}{3} =$
- **3.** Find x if the perimeter of this rectangle is 20.



For Problems 4–6, use the grid to the right.

- **4.** What is the area of the shaded region? \_\_\_\_\_
- **5.** What is the perimeter of the shaded region?
- 6. What percentage of the boxes are shaded? \_\_\_\_\_



**?.** Circle the numbers that make  $\frac{n}{5} \le 3$  a true statement:

5

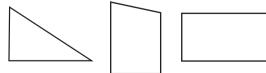
10

20

**8.** If the time is 4:15, what time will it be in nine hours?

15

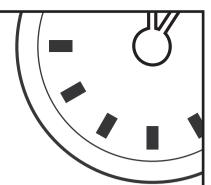
- $\mathbf{g}$ . If you rearranged the numbers in 1,996, what is the largest number you can make?
- **10.** Shade the shape with the most right angles.











For Problems 1–2, use the box to the right.

- Using the numbers 4, 5, and 6, fill in the empty boxes so the rows and columns add up to 15.
- **2.** Do the diagonals in Problem 1 also add up to 15? Circle: Yes or No

9	2	
1		8
	7	3

For Problems 3–5, use the calendar to the right.

- What date is two weeks from the 5th?
- 4. If apartment rentals cost \$10 per day, how much will it cost to rent an apartment for the month of March?

S	M	T	W	T	F	S
				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	28	29	30	31

MARCH

- **5.** How many weekend days are there in March? \_\_\_\_\_
- **6.** Roger has successfully caught 10 passes in a row. What conclusion can we make about his next (11th) attempt?
  - a. Roger will catch the 11th pass.
  - **b.** Roger will drop the 11th pass.
  - c. Roger may catch or drop the 11th pass.

**7.** If 
$$\frac{12}{20} = \frac{x}{100}$$
, then  $x =$ \_\_\_\_\_.

For Problems 8-10, cross out the item that does NOT belong in each list.

- **8.** gallons
- liters
- cups

grams

- 9.
- miles
- feet
- inches
- meters

- 10.
- pounds
- centimeters
- grams

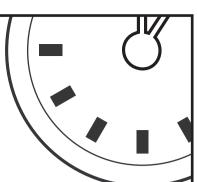
39

ounces







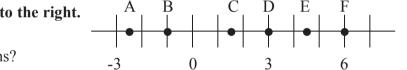


- MINUTE 33
- **1.** Complete the times table to the right.

×	7	8
5		40
6	42	

- **2.** Seven quarters, three dimes, and one nickel = \$ \_\_\_\_\_.
- 3. If a + 12 = 31, then a =\_\_\_\_\_.
- **4.** The sum of two identical numbers is 16. What is the number?

For Problems 5–6, use the number line to the right.



- **5.** Which letters represent fractions?
- **6.** Which letter is located directly between 3 and 6? \_\_\_\_\_

For Problems 7–10, cross out the item that does NOT belong in each list.

- **7.** 2
- 6

- 10
- 11

- **8.** 3
- 7

- 12
- 13

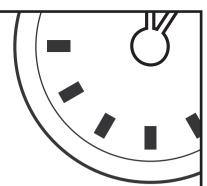
- **9**. /

- **10.** 65%
- $\frac{2}{3}$
- $0.\overline{6}$









- MINUTE 34
- 20(300) =
- **2**. 2)36 =
- **3.** Complete the missing numbers in the table to the right.

Sum	Product	Numbers
12	35	and

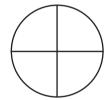
**4.** Which line segment is longer?

Circle:  $\overline{XY}$  or  $\overline{YZ}$ 

X Y Z

**5.** Using the line given in Problem 4, find  $\overline{XZ}$  if  $\overline{XY} = 6$  and  $\overline{YZ} = 3$ .

**6.** Shade 75% of this circle.



**?.** Write as an improper fraction:  $5\frac{1}{3} =$ 

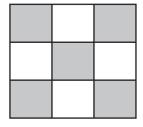
**%.** What number does point A represent?



**9.**  $\frac{3}{5} \cdot \frac{1}{2} \cdot \frac{3}{4} =$ 

**10.** A tile on the floor looks similar to the shape to the right. If an egg is accidentally dropped on the tile, where would it be more likely to land?

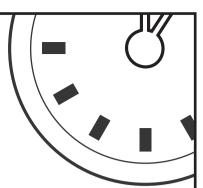
Circle: A gray square or A white square







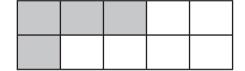




- \$ 40.75 - 4.57
- **2.** If  $15 \times a = 135$ , then a =\_\_\_\_.

For Problems 3–4, use the grid at the right.

**3.** What fraction of the rectangle is shaded? (express in lowest terms)



- **4.** What fraction of the rectangle is NOT shaded? (express in lowest terms) \_\_\_\_\_
- **5.** Which one of the following line segments is the longest?

**b.**  $\overline{BC}$ 



Using the number line given in Problem 5, if  $\overline{AC} = 12m$  and  $\overline{BC} = 7m$ , then  $\overline{AB} = \underline{\phantom{AB}}$ .

c.  $\overline{AC}$ 

For Problems 7–10, cross out the item that does NOT belong in each list.

**7.** 5

**a.**  $\overline{AB}$ 

7

11

14

- **8.** 5
- 9

27

63

- **9.**  $\frac{5}{5}$
- 19

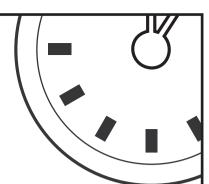
1%

- $\sqrt{1}$
- 10. B L A C K B R O W N G R E E N R E D





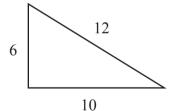




- MINUTE 36
- Write  $\frac{7}{4}$  as a mixed number.
- **2.** Reduce:  $\frac{4}{20}$  =
- **3.** What is the reciprocal of  $\frac{8}{3}$ ? \_\_\_\_\_
- **4.** If a = 28 and b = 4, then  $\frac{a}{b} =$ \_\_\_\_\_.
- **5.** Ten dollars is equal to \_\_\_\_\_ pennies.

For Problems 6–7, use the triangle to the right.

**6.** What is the perimeter of the triangle? \_\_\_\_\_



What is the area of the triangle?

(Hint: Take half of the base times the height.)

**8.** Use the information below to fill in the Venn diagram to the right.

Hot Dogs
/
X
$( \ \ )$
Hamburgers

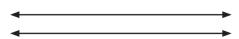
Students' Favorite Foods

Students Tuvonite Toods		
Hamburgers	8	
Hot dogs	10	
Both	4	



These two lines are \_\_\_\_

Circle: parallel or perpendicular



10.

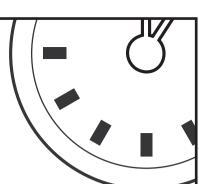
Find the next letter and number in the series: A4, D6, G8, J10, \_\_\_\_\_

43

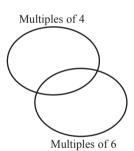




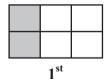




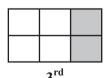
- 1. If  $\frac{1}{3} = \frac{x}{6}$ , then x =\_\_\_\_\_.
- **2.**  $\frac{1}{3} + \frac{3}{6} =$
- $3. \quad 0.46 + 0.05 =$
- **4.** Fill in the missing number:  $5 \bullet \boxed{\phantom{0}} = 0.25$
- Which of these numbers represents seventeen thousandths?
  a. 0.0017
  b. 0.17
  c. 0.017
  d. 0.00017
- 6. Put the numbers {4, 12, 16, 18, 20} into the Venn diagram. (Hint: One of the numbers will go in both rings.)

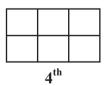


**?.** Shade the boxes in the 4th shape to create the next shape in the sequence.

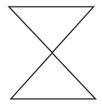








- Find the two prime numbers that complete the equation.  $\boxed{ + \boxed{ }} = 12$
- **9.** Draw the horizontal and vertical lines of symmetry in this figure:

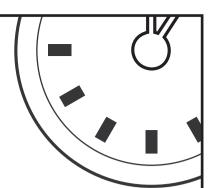


**10.**  $2\frac{1}{4} \text{ km} = \underline{\hspace{1cm}}$  meters







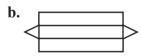


- $\frac{1}{5} \frac{1}{10} =$
- Circle three consecutive decimals in the grid that have a sum of 0.8. (**Hint:** no diagonals)

0.3	0.4	0.9
0.2	0.2	0.2
0.6	0.2	0.5

- 3. 0.3(5+3-2) =
- 4. Circle the net below that will create a triangular pyramid.









- 5. Write the number twenty-three thousandths.
- 6. Round the number  $45.\overline{6}$  to the nearest tenth. \_\_\_\_\_

For Problems 7–10, cross out the item that does NOT belong in each list.

$$2. \frac{1}{2}$$

8.

length 
$$\times$$
 width  $\frac{1}{2}$  length  $\times$  width base  $\times$  height

$$length \times width \times height$$

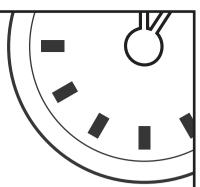
81

45

- 10. red
- yellow
- orange
- purple



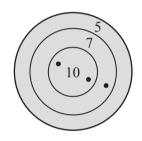




- 1. In the number 38.7165, what number is in the hundredths position? \_\_\_\_\_
- **2.** Round the number in Problem 1 to the nearest thousandth.
- **3.** The least common denominator of  $\frac{1}{4}$  and  $\frac{1}{6}$  is \_\_\_\_\_.

For Problems 4–5, use the picture to the right.

4. If the black dots represent Beth's three "hits," what is her score on the dartboard?



- **5.** If Beth "hits" a 5 on her next throw, what will her total be? \_\_\_\_\_
- **6.** Find the next letter and number in the series: Z1, Y2, X3, W4,

For Problems 7–10, match the words with their correct algebraic expression.

 $\mathbf{7}$  nine times n plus 1

**a.** 9(n+1)

 $\mathbf{g}$ , the square root of n

- **b.**  $\frac{n}{9}$
- $\mathfrak{G}$  nine times the sum of n and 1
- **c.** 9n + 1

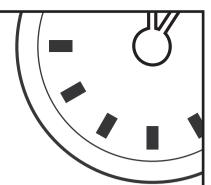
**10.** the quotient of n and 9

**d.**  $\sqrt{n}$ 









		^		10
1.	Complete the times table.	12		120
	-	13	117	

- **2.** Order the decimals {0.058, 0.508, 0.085, 0.580} from least to greatest.
- **3.** Draw a dot at the midpoint of A and B and label it C.



**4.** Using the line in Problem 3, if  $\overline{AB} = 11$ , then  $\overline{AC} = \underline{\phantom{AC}}$ .

For Problems 5–7, use the frequency table to the right.

**5.** What was the highest score? \_\_\_\_\_

6.	What score occurred most often?
----	---------------------------------

**7.** How many people took the test? \_\_\_\_\_

Score	Tally		
95			
90			
85			
80			
75			
70			
65			
Below 60			

- The length and width of a box are 4 in. The volume is 48 in.<sup>3</sup> What is the height of the box?
- **9.** Circle the numbers that are greater than 1,100.

1,109

 $10^{4}$ 

1,006

999

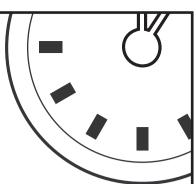
 $\sqrt{1 \ billion}$ 

**10.** 4 • 6 • 8 • 0 • 5 • 2 =









- MINUTE 41
- 1. Order the decimals {3.0, 0.3, 0.33, 3.3} in ascending order (least to greatest).
- **2.** Fill in the remaining factors of 30.

1	3	5	10	30

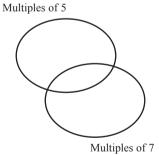
For Problems 3–5, use the chart to the right.

- **3.** More people exercised on \_\_\_\_\_ than any other day.
- **4.** Fewer people exercised on \_\_\_\_\_ than any other day.
- **5.** On Saturday, \_\_\_\_\_ times as many people exercised than on Friday.

Exercise Day	Tally (hundreds)		
M	1111		
T	1.1		
W	111		
TH	I		
F	11		
S	11111		
SU	11		

For Problems 6–7, use the Venn diagram to the right.

- 6. Put the numbers 5, 14, 20, 21, 30, and 35 into the Venn diagram.
- **?.** Which number from Problem 6 belongs in both circles? \_\_\_\_\_



For Problems 8–10, evaluate the expressions if a = 4, b = 6, and c = 10.

8. 
$$\frac{5b}{c}$$
=

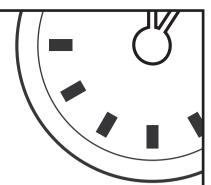
**9.** 
$$\frac{1}{2}ab =$$

**10.** 
$$a(b+c) =$$







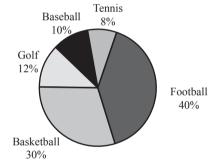


- MINUTE 42
- **1.** Can 233 be evenly divided by 2? Circle: Yes or No
- What is the rule for the following sequence: 16, 24, 36, 54, 81, . . .?
  a. add 12
  b. add 18
  c. multiply by 1.5
  d. multiply by 2
- **3.** Complete the table.

Fraction	Decimal	Percent
	0.3	30%

### For Problems 4–7, use the circle graph to the right.

- **4.** Which is the more popular sport: golf or tennis?
- **5.** What two sports added together have the same percentage as football?



**Favorite Sports** 

- Which two sports added together represent half of
- everyone surveyed? \_\_\_\_\_
- **7.** If 300 people took part in this survey, then \_\_\_\_\_\_ people said that baseball was their favorite sport.
- 8. Is the number  $\frac{1}{6}$  closer to 0,  $\frac{1}{2}$ , or 1? \_\_\_\_\_
- **9.** Is the dashed line shown a line of symmetry? Circle: Yes or No



- **10.** Does n = 7 solve the problem 2n + 3.5 = 17.5?
- Circle: Yes or No

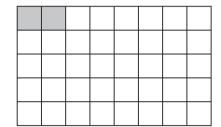








Shade 15% of the boxes. (Hint: 5% are already shaded for you)



- 16.29 0.3 =
- 2 + 0.2 + 0.02 + 0.002 =
- There are 20 nickels in a dollar. How many nickels are in 25 dollars?

For Problems 5–8, use the frequency table to the right.

- 5. What is the mode?
- The mean of the scores is 80. If Sarah gets a 90, the mean will .
  - a. go down
- **b.** stay the same
- c. go up a lot
- d. go up a little
- The median (score in the

e middle)	is		

How many people took the test?

Score	Tally				
95					
90					
85	Π	Ι	T		T
80					
75	П				
70	П				
65	П				
Below 60					

9. Which of the following is the next shape in the pattern?









 $\bigcirc$ 



- b.

c.

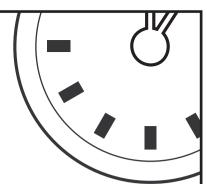
10.

- d.
- Put a decimal point in the number 26583 so that the 5 has a value of  $\frac{5}{100}$ .









$$\frac{7}{12} - \frac{1}{2} =$$

For Problems 2–3, use the grid to the right.

What fraction of the squares are shaded? (Write in lowest terms.)



**3.** What fraction of the squares are NOT shaded?

For Problems 4–5, use the chart to the right.

M	Т	W	T	F	Sat	Sun
32	16	8				

- Mary started the week with 32 bananas. On Tuesday her family ate half of them. On Wednesday they ate half of the remaining bananas. If they continue doing this each day, on which day of the week will only one banana be left?
- **5.** If Mary's family continues to eat half of the remaining banana supply each day, will they ever get to zero bananas? Circle: Yes or No

For Problems 6–8, fill in the boxes to complete the equivalencies.

**6.** 
$$1 \text{ m} = 100 \text{ cm}$$

**7.** 
$$1 \text{ kg} = 1,000 \text{ g}$$

$$3.2 \text{ kg} = \boxed{\text{g}}$$

$$60 g = \boxed{\phantom{0}} kg$$

**9.** What number does Point A represent? \_\_\_\_\_



**10.** Cross out the shape that does NOT belong.





51



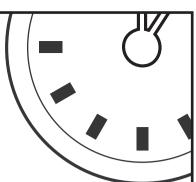


a.





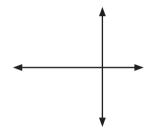




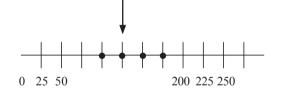
$$3. \quad 0.2 + 0.3 + 0.5 + 0.2 =$$

These lines are \_\_\_\_\_.

Circle: parallel or perpendicular



**5.** What number is the arrow pointing toward in the number line to the right? \_\_\_\_\_



**6.** Circle the number that is different from the others.

226

357

486

451

842

For Problems 7–10, circle *True* or *False* if a = 3, b = 5, and c = 11.

a, b, and c are prime numbers

True

or

False

**8.** ab > bc

True

or

False

**9.**  $a^b = b^a$ 

True

or

False

10.

a + b + c = a prime number

True

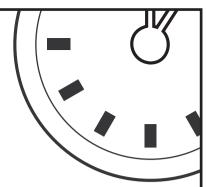
or

False









- 9)729 =
- **2.** Put a decimal in the number 3467 so that the 7 has a value of  $\frac{7}{100}$ .
- **3.** Fill in the remaining composite numbers between 4 and 18.

4	6		12	15	16	18

4. A regular polygon is a shape with all sides equal in length. Which of these is an irregular polygon?



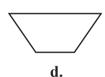
a.



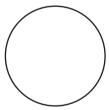
h



c.



- **5.** Bill has \$3. Tom has twice as much as Bill. Linda has three times as much as Tom. How much does Linda have?
- **6.** Draw perpendicular diameters in the circle.



- **7.** If  $\frac{2}{5} = \frac{a}{10}$ , then a =\_\_\_\_\_.
- **8.** Use the digits 4, 9, and 1 to make two numbers greater than 875. \_\_\_\_\_
- **9.** What numbers in the set  $\{2, 4, 6, 8, 10\}$  satisfy the inequality  $\frac{n}{2} + 1^3 \ge 5$ ?

53

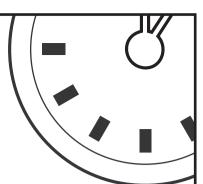
**10.** Shade the 2nd circle after the 3rd circle from the left.







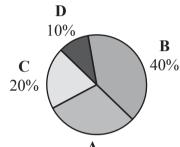




# 1. 132 minutes = \_\_\_\_\_ hour(s) \_\_\_\_\_ minutes.

For Problems 2–4, use the circle graph to the right.

- **2.** What percent must category A be equal to?
- Which two categories make up 50% of the graph? \_\_\_\_\_ and \_\_\_\_.



4. If these were the grades on a recent test, then the majority of the class\_\_\_\_\_. Circle: Passed or Failed

$$5. \quad \left[\frac{1}{3}\right] \left[\frac{1}{4}\right] + \left[\frac{2}{3}\right] \left[\frac{3}{4}\right] =$$

For Problems 6-10, match each word with its correct definition.

- **6.** perpendicular
- **a.** A number that can only be divided by 1 and itself.

**7.** parallel

**b.** Two lines that never intersect and are spaced equally apart.

**8.** diameter

c. Two lines that intersect at right angles.

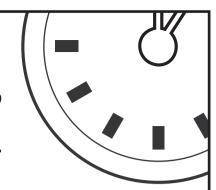
**9.** prime

- **d.** The distance across a circle through its center.
- 10. composite
- e. A number having other factors besides 1 and itself.



# ( Y )

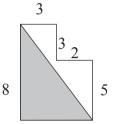




# MINUTE 48

### For Problems 1–3, use the figure to the right.

What is the width of the base of the hexagon? \_\_\_\_\_



- **2.** What is the perimeter of the hexagon? \_\_\_\_\_
- **3.** What is the area of the shaded triangle? \_\_\_\_\_
- **4.** 10% of 120 =
- **5.** If 8m = 416, then m =\_\_\_\_\_.

### For Problems 6-10, match each word with its correct definition.

**6.** factor

a. a six-sided shape

**?.** hexagon

**b.** the amount of surface a shape covers

- **8.** pentagon
- $\mathbf{c}$ . the distance around the outside of a shape

- **9.** perimeter
- **d.** a number that goes evenly into another number

**10.** area

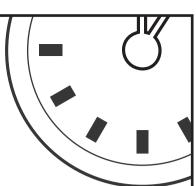
e. a five-sided shape







 $\bullet \frac{1}{4} = \frac{3}{16}$ 



# MINUTE 49

- **2.** Fill in the square to complete the equation.
- **3.** 15 seconds = \_\_\_\_ minutes. Circle: 4 0.5 2 0.25
- **5.** What is the area of the rectangle in Problem 4? \_\_\_\_\_
- 6. Do all rows and columns add up to the same number in this grid?

  Circle: Yes or No

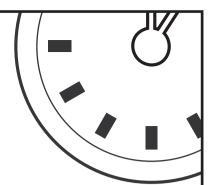
  2 7 6
- 7. Fill in the missing number in the box.  $2 \xrightarrow{5 \longrightarrow 8 \longrightarrow 11}$  $8 \longrightarrow 32 \longrightarrow \boxed{}$

### For Problems 8–10, estimate to find the best answer.

**10.** 
$$\frac{29}{50} =$$

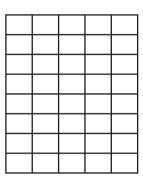






For Problems 1–3, use the grid to the right.

- Shade 15% of the squares.
- 2. What percent of the squares will NOT be shaded?
- 3. What is the perimeter of the grid?



4. Shade the squares in the 4th shape to complete the sequence.



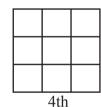




2nd



3rd



- 5. The ages of the Eagle Cadet group members are 4, 6, 7, 7, and 11. What is the mode age? \_\_\_\_\_

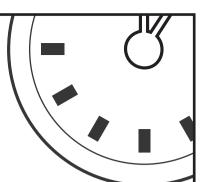
57

- 6. What is the mean age of the Cadet group in Problem 5?
- What is the median age of the Cadet group in Problem 5?
- 8.  $3 + 6^2 \div 12 =$
- If y = 3x 6 and x = 7, then  $y = _____$ .
- $2^{2}(3+7-1)=$









$$(-)(-) = +$$

$$(-)(+) = -$$

$$(-) \div (-) = +$$

$$(-) \div (+) = -$$

$$(-) + (-) = -$$

**3.** According to the chart, a negative plus a negative makes a \_\_\_\_\_

4. 
$$(-5)^2 =$$

**5.** If 
$$\frac{12}{n} = 24$$
, then  $n =$ \_\_\_\_\_.

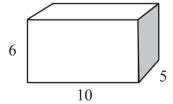
**6.** Use the function rule above the chart to fill in the empty boxes.

x	у
4	
5	7

10

y = 2x - 3

- **7.** $3.426 \times 10^3 =$
- **8.** What is the volume of the box? \_\_\_\_\_

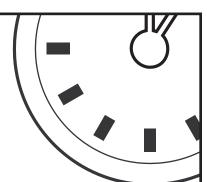


- A bag holds seven red marbles and three blue marbles. If Jill reaches into the bag and pulls out one marble, what is the probability that the marble will be red?
- 10. If all 10 marbles described in Problem 9 were still in the bag, what is the probability that Jill would pull out a blue marble? \_\_\_\_\_









$$\frac{1}{9} = \frac{-45}{9} = \frac{1}{9}$$

**3.** 
$$(-2 \cdot -4)^2 =$$

$$(-)(-) = +$$

$$(-)(+) = -$$

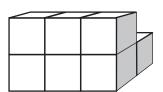
$$(-) \div (-) = +$$

$$(-) \div (+) = -$$

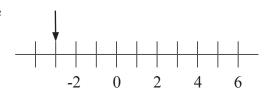
59

x	у
2	13
5	28
3	18

- 4. Look at the chart and complete the function rule. y = 5x +\_\_\_\_
- 6. How many small blocks make up this shape? \_\_\_\_\_ (Hint: be sure to count only the blocks you can see)



**6.** What number on the number line is the arrow pointing toward? \_\_\_\_\_



For Problems 7–10, evaluate if x = -2, y = 3, and z = 10.

$$\mathbf{Z}$$
,  $xyz =$ 

$$2xy =$$

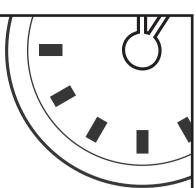
**9.** 
$$\frac{y}{z} = _{0}$$

**10.** 
$$\frac{z}{v+2} =$$









1. If 
$$8n = -40$$
, then  $n = ____$ .

**2.** If 
$$\frac{n}{4} = 12$$
, then  $n =$ \_\_\_\_\_.

For Problems 3–5, use the chart to the right.

**3.** 
$$y_2 - y_1 =$$

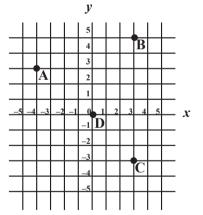
$y_1$	$y_2$	$x_{_{I}}$	$x_{2}$
6	12	3	5

4. 
$$x_2 - x_1 =$$

$$\mathbf{5.} \quad \frac{y_2 - y_1}{x_2 - x_1} =$$

For Problems 6–10, use the coordinate grid to the right.

**6.** Which letter is at the origin (0, 0) of the grid? \_\_\_\_\_

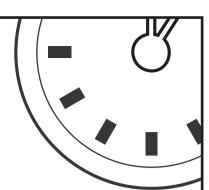


- **?.** Which letter(s) are located three units to the right of the origin?
- **&.** Which letters are located above the origin?
- To go from point A to point B you would have to go \_\_\_\_\_.a. NEb. SEc. SWd. NW
- 10. Is there a letter located four units left of the origin and down two units? Circle: Yes or No









y

## MINUTE 54

**Rules of Integers** 

$$3 + (-4)(-3) - 5 =$$

$$(-)(-) = +$$

$$(-)(-) = +$$

$$(-)(+) = -$$

$$(-) \div (-) =$$

$$(-) \div (+) =$$

$$(-) \div (+) =$$

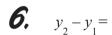
$$(-) \div (+) =$$

**3.** If 
$$-7m = -28$$
, then  $m =$ \_\_\_\_.

4.	Look at the chart and complete the function rule.
	$y = x^2 + \underline{\hspace{1cm}}$

_		2	5
5.	Using the chart in Problem 4, if $x = 10$ , then $y = $	5	26

For Problems 6–8, use the chart to the right.



$y_{_{I}}$	$y_2$	$x_{_{I}}$	$x_{2}$
4	10	2	5

$$x_2 - x_1 =$$

$$\frac{y_2 - y_1}{x_2 - x_1} =$$

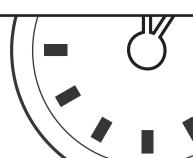
- 9. Put the numbers {10, -10, 5, -5, 0} in ascending (smallest to greatest) order.
- 10. Put the numbers  $\{-5, 0, 3^2, (-2)^2\}$  in descending (greatest to smallest) order.

61

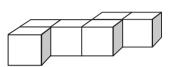


# ( Y:)





- MINUTE 55
- **1.** How many blocks are in the shape to the right? \_\_\_\_\_



**2.** Shade the squares in the 4th shape to complete the sequence.









1st Shade the octagon.









**4.** Shade the trapezoid.







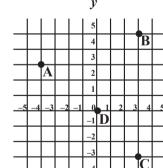
c.

62



For Problems 5–8, use the coordinate grid to the right.

**5.** Which letter is at the origin (0, 0) of the grid? \_\_\_\_\_



- 6. The coordinates of point B are (3, 5). What are the coordinates of point C?
- **?.** What are the coordinates of point A? \_\_\_\_\_
- 8. To go from point C to point A, you have to go \_\_\_\_\_.

  a. NE b. SE c. SW d. NW
- For Problems 9–10, use > , <, or = to complete.



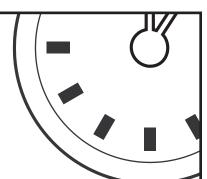
10.

$$\frac{(-6)^2}{4}$$
  $\sqrt{(-4)(-25)}$ 









- **1.** Use •, +, -, or ÷ to complete: 15 12 3 = 9
- **2.** If  $\left[ \frac{3}{13} \right] \left[ \frac{a}{4} \right] = \frac{15}{52}$ , then a =\_\_\_\_\_.
- **3.** If  $36 = 2^x \cdot 3^x$ , then x =\_\_\_\_\_.
- Write .01212... using bar notation.
- **5.** If you multiply the number \_\_\_\_ times itself and add 1, you get 37.
- 6. Write  $10\frac{3}{4}$  as an improper fraction.

For Problems 7–10, circle *True* or *False*.

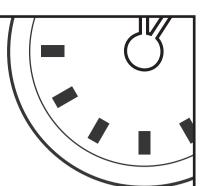
**?.** Railroad tracks are a good example of perpendicular lines.

- True or False
- $\mathbf{g}$  (negative) × (negative) × (negative) = positive.
- True or False
- **9.** The fraction  $\frac{2}{3}$  is closer to  $\frac{1}{2}$  than it is to 1.
- True or False
- 10. Trapezoids, squares, and rectangles all have four sides. True or False









$$2(-5+3 \cdot 4) =$$

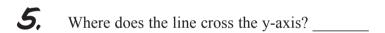
**2.** If 
$$3n-2=10$$
, then  $n=$ \_\_\_\_.

**3.** If 
$$40 = 2^x \cdot 5$$
, then  $x =$ \_\_\_\_.

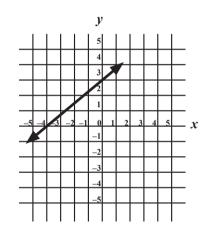
For Problems 4–6, use the coordinate grid to the right.

As you move from left to right, the line on the grid:

Circle: goes up goes down is level



**6.** Where does the line cross the x-axis? \_\_\_\_\_

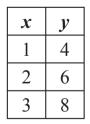


- Find the next letter and number in the series: A3, D6, G9, \_\_\_\_\_.
- Look at the chart and complete the function rule. y = x + 2

Using the chart in Problem 8, if $x = 10$ , then $y = 10$	9.	Using the chart in Problem 8, if $x = 10$ , then $y = 10$ .
---	----	---

**10.** Ali flips a coin two times. The possible results are shown to the right. List the four possible outcomes for two flips. Two have been done for you.

HH, HT, \_\_\_\_\_, \_\_\_\_.



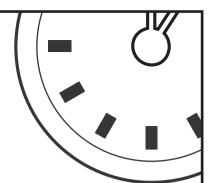
 $H \xrightarrow{T} T$   $T \xrightarrow{H} T$ 

1<sup>st</sup> toss 2<sup>nd</sup> toss

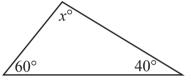








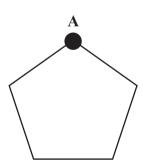
- 1. Use + or to complete. (3 6) 12 = 9
- $(-3)^3 =$
- 3. If all the angles of a triangle total  $180^{\circ}$ , then angle x in this triangle is



- 4. Martin folds a sheet of paper in half, then in half again, and in half yet again. When he unfolds it, the paper is divided into sections.
- This letter H has \_\_\_\_\_.a. parallel linesb. perpendicular linesc. both
- 6. A is to  $\mathbf{A}$ , as  $\square$  is to  $\underline{\hspace{1cm}}$ .
  - a.
- .

65

- d.
- **7.** If point A, one of the vertices of a pentagon, is connected to each other vertex in the pentagon, \_\_\_\_\_ triangles will be formed.
  - **a.** 2
- **b.** 3
- **c.** 4
- **d.** 5



For Problems 8–10, evaluate if a = 4, b = -5, and c = 2.

- **8.** -h =
- **9.**  $\frac{ab}{c}$  =
- **10.** a + bc =

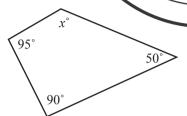








If the angles of a four-sided shape total  $360^{\circ}$ , then angle x is



- **2.** Circle the numbers that are greater than 2, but less than 2.4. 2.03 2.41 1.99 2.22 3.1
- **3.** The only even prime number is \_\_\_\_\_.
- 4. 16 weeks, 2 days is the same as \_\_\_\_\_.
  a. 105 days
  b. 126 days
  c. 114 days
  d. 88 days
- **5.** Leah is dealing cards. She deals a king, then a queen, then a king. The next card to be dealt will be:
  - a. queen
- **b.** king
- c. can't tell
- d. ace
- **6.** What is the pattern in this sequence?









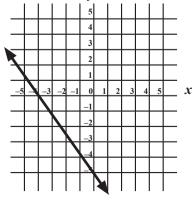




- What is the lowest composite number with the factors of 2, 3, and 4? \_\_\_\_\_
- Friends were sharing a bag of candy. Mike ate one-fourth of the candy. Shelby ate one-eighth of the candy originally in the bag. Then Shelby's dog ate one-half of the candy originally in the bag. How much candy remains?

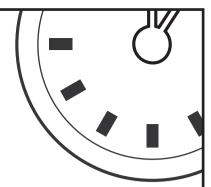
### For Problems 9–10, use the graph to the right.

- **9.** Where does the line cross the y-axis (y-intercept)? \_\_\_\_\_
- **10.** What is the x-intercept? \_\_\_\_\_

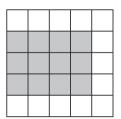


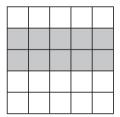






- You would most likely measure the width of a swimming pool in:
  - a. cm
- **b.** m
- c. mm
- d. km
- Write the smallest possible number using the digits 4, 2, 8, 9, and 1.
- 3. Do the shaded shapes to the right have the same Circle: Yes perimeter? No





- $(-8)^2 5 =$
- Which shape below shows an obtuse angle?







- Complete the sequence: 4.8, 5.4, 6.0,
- Circle three numbers below that have a sum of 7. -6 3

5

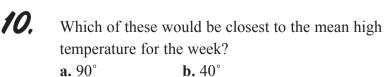
0

8

67

For Problems 8–10, use the graph to the right.

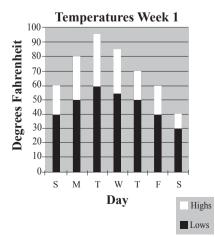
- 8. Which day of the week was the warmest?
- 9. Which day of the week had the narrowest gap between the high and low temperatures? \_\_\_\_\_





**b.** 40°

**d.** 80°











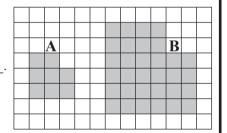
- MINUTE 61
- If the area of one side of this cube is 25cm<sup>2</sup>, what is the area of the whole surface of the cube?



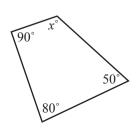
- **2.** Fill in the missing number:  $3 \cdot \boxed{\phantom{0}} = 1.8$
- What is the sum of the first four composite numbers in the list below?

-5 + -7 + 10 + 10 =

- **5.** If -3(4+a) = -15, then a =\_\_\_\_.
- The length of each side of shape A has been doubled to create shape B. This means that the area of shape B is \_\_\_\_\_.



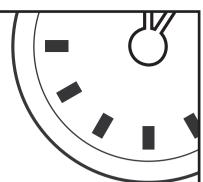
- a. doubled
- **b.** three times bigger
- **c.** four times bigger
- **d.** six times bigger
- **?.** A number is between 20 and 30 and is three times the sum of its digits. What is the number? \_\_\_\_\_
- **8.** Fill in the blanks using the numbers 7, 6, 2, 9, and 8 to make the smallest possible number.
- **9.** Find the next letter and number in the series: A1, B4, C9, D16,
- **10.** In the quadrilateral to the right, angle x equals \_\_\_\_\_.











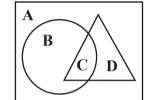
**1.** Add the two shaded areas together. (**Hint:** Each set of shaded and unshaded boxes represents a fraction. Find the sum.)

+



For Problems 2–4, use the diagram to the right.

**2.** Which letter is inside the circle and the triangle? \_\_\_\_\_



- **3.** Which letter is outside the circle but inside the triangle?
- **4.** Which letter is outside the circle and the triangle?
- Look at the chart to the right and complete the function rule. y = -3x +\_\_\_\_\_

x	у
1	-1
2	-4
3	-7

- 6. Using the chart in Problem 5, if x = 12, then y =\_\_\_\_\_.
- 7. Tom has four dollars. Bob has three times as much as Tom. Cindy has twice as much as Bob. How much do they have altogether?

$$\frac{4 + (-3)(-2)}{-2} =$$

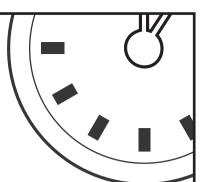
- **9.** Circle the number that is different from the others.
  - 4
- 6
- 12
- 15
- **10.** Complete the bottom row of numbers on this chart.

			1				
		1	3	1			
	1	3	5	3	1		
1	3	5	7	5	3	1	



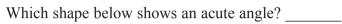
# ( Y )





## MINUTE 63

. Which



a.



b

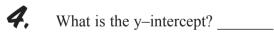


C



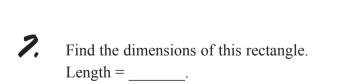
- **2.** An unknown number is half the product of 4 and 12. The number is \_\_\_\_\_.
- Jim's father is older than 40 but younger than 50. If you divide his age by 2, 4, 5, 8, or 10, there will be a remainder of 1. How old is Jim's father?

For Problems 4–6, use the coordinate grid to the right.

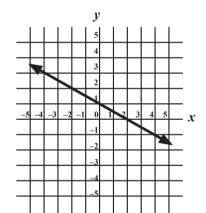


Width = \_\_\_\_\_.

- What is the y-intercept?
- 6. Does the line slope up or down?



What is the x-intercept?



- Perimeter = 20 m Area = 21 m<sup>2</sup>
- 8. If pens cost 15 cents, how many can you buy with \$3.00?
- **9.** If one side of a cube has an area of 10 m<sup>2</sup>, what is the surface area of the entire cube? \_\_\_\_\_
- *10.* 4 + 3 (-2) =



### For Problems 1–5, match each word with its correct definition.

- **1.** congruent
- **a.** The amount of square units covering the outside of a shape.
- 2. similar
- **b.** A triangle with two equal sides.
- **3.** equilateral
- **c.** Two figures with the exact same size and shape.
- 4. isosceles
- **d.** Two figures with the same shape but different size.
- **5.** surface area
- **e.** A triangle with three equal sides.
- 6. Which number is three places to the right of the median? \_\_\_\_\_

1	2	3	4	5	6	7	8	9

- Circle the numbers in the set  $\{2, 3, 4, 5, 6, 7\}$  that make the inequality 3a + 1 > 14 true.
  - 2
- 3
- 4
- 6
- 7

- **8.**  $\left[\frac{3}{7}\right]\left[\frac{2}{3}\right] =$
- **9.**  $\frac{3}{11} \div \frac{2}{7} =$
- **10.** Complete the chart if y = 2x + 6

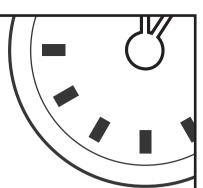
x	y
-2	
	4
0	

21









- MINUTE 65
- Complete the times table.

- Write an equation that represents this statement: two times a number plus 1 is 11.
- 3. What number would solve the equation in Problem 2?

For Problems 4-6, cross out the item that does NOT belong on the list.

- 16
- 100







For Problems 7–10, match the problems with their correct answers.

2.

$$13a = -26$$

**a.** 
$$a = 1$$

 $\frac{a}{4} = -5$ 

**b.** 
$$a = -2$$

a - 11 = -10 **c.** a = -20

**c.** 
$$a = -20$$

a + 3 = -14

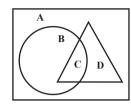
**d.** 
$$a = -17$$







Which letter is inside all three shapes? \_\_\_\_\_

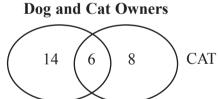


- Which letter is inside the triangle but outside the circle?
- Which of these shaded shapes has a perimeter of 14 units?
  - a.

b.

- c.
- Which shape in Problem 3 has the greatest area?
- 5. A shape with the greatest perimeter always has the greatest area. Circle: True or False
- 6. According to this Venn diagram, how many people have a dog? \_\_\_\_\_





Complete the chart.

Fraction	Decimal	Percent
	0.2	

23

For Problems 8–10, use >, <, or = and let a = -2, b = -4, and c = 5.

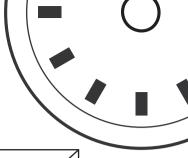
- ab c
- **10.**  $\frac{1}{2}ab$  \_\_\_\_\_  $\frac{c}{0.5}$











What fraction of the total square is shaded? \_\_\_\_



 $\frac{1}{4} \cdot 24 =$ 

- 12 18 -9 -3
- Complete this division table.
- 20% of 70 =
- Which shape below shows a right angle?







- $2^3 5 =$
- A is to V as A

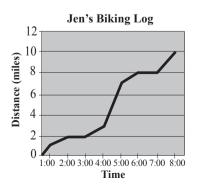






For Problems 8–10, use the graph to the right.

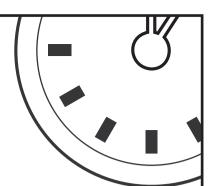
- 8. At what time did Jen finish her trip?
- How many miles did Jen ride? \_\_\_\_\_
- 10. At what two times did Jen appear to take a break? \_\_\_\_\_ and \_\_\_\_\_.











- MINUTE 68
- **1.** Fill in the remaining boxes to complete the pattern.

7	28	35		49
---	----	----	--	----

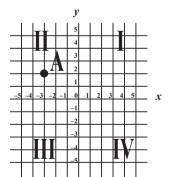
How many small cubes placed on top of the grid, fitting exactly on the squares, would it take to make a large cube?



- 3. If  $\frac{1}{4} \frac{2}{3} + \frac{3}{5} = \frac{a}{60}$ , then  $a = \underline{\phantom{a}}$ .
- Circle the numbers in the set  $\{3, 6, 9, 12, 15\}$  that make the inequality  $\frac{a}{3} + 1^3 \ge 4$  true.

For Problems 5–7, use the coordinate grid to the right.

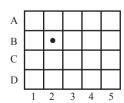
**5.** The Roman numerals identify the quadrants. In which quadrant is point A?



- **6.** What are the coordinates of point A?
- **?.** In which quadrant would (5, -3) be? \_\_\_\_\_

For Problems 8–9, use the chart to the right.

If the dot (B2) is shifted two squares south and two squares east, in which square will it be?



**9.** If the dot (B2) is moved one square northwest, in which square will it be?

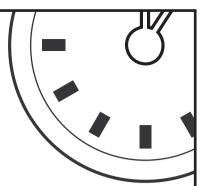


**10.** Draw a vertical line of symmetry through the heart.









- MINUTE 69
- **1.** Complete this addition table.

+	-5	-6
3	-2	
8		2

**2.** Circle the numbers that can be divided evenly by 3, 4, and 5.

12

15

24

30

60

**3.** How many times bigger is the underlined 5 than the other 5 in the number 45,245?

**a.** 1,000 times

**b.** 100 times

**c.** 10 times

**4.** Circle the objects below that are longer than 1 meter.

calculator

mouse

bed

basketball

dining table

**5.** Circle the objects that are shorter than 5 centimeters.

paper clip

book

writing paper

pencil eraser

bottle cap

**6.** What is the volume of a box that is 6 in.  $\times$  8 in.  $\times$   $\frac{1}{2}$  in.?

## For Problems 7–10, match each word with its correct definition.

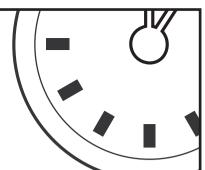
- **?.** consecutive numbers
- a. when numbers are in order from least to greatest

**8.** coordinates

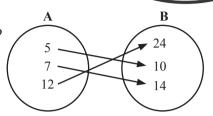
- **b.** numbers used to locate points on a grid
- **9.** descending order
- c. numbers that follow in order and are not interrupted
- **10.** ascending order
- **d.** when numbers are in order from greatest to least







**%** What relationship do the arrows represent in the diagram?



**2.** What fraction of the total shape is shaded? \_\_\_\_\_



- **3.** If  $3! = 3 \cdot 2 \cdot 1$ , what does 4! equal?
  - **a.** 6
- **b.** 12
- c. 24
- **d.** 120
- Which of these is an equilateral triangle? \_\_\_\_\_









**5.** Which shape in Problem 4 is a right triangle?

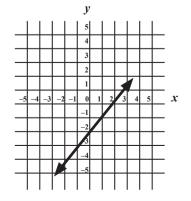
For Problems 6–7, use the pie chart to the right.

- **6.** Shade 25% of the pie chart.
- **?.** If six slices of the pie chart were shaded, what percent would that represent? \_\_\_\_\_



For Problems 8–10, use the graph to the right.

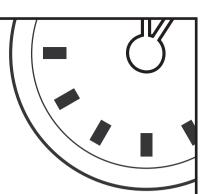
- In which quadrant would the point (3, 3) be? \_\_\_\_\_
- **9.** In which quadrant would the point (-2, -5) be? \_\_\_\_\_
- **10.** Does the line have a positive slope or a negative slope?











For Problems 1–3, use the stem-leaf plot to the right.

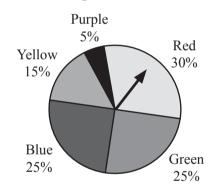
- What number is the mode of the plot? \_\_\_\_\_
- **2.** Does the number 64 appear on the plot? \_\_\_\_\_
- **3.** How many numbers are represented by the plot? \_\_\_\_\_
- 1 | 1 2 2 2 | 2 6 8 3 | 0 1 2 5 | 5 5 5 6 6 | 1 3 5 7 | 2 3

KEY 6|1 represents 61

4 6

For Problems 4–7, use the spinner diagram to the right.

- 4. On which color is the spinner most likely to stop?
- **5.** Is there a better chance of spinning Blue or Yellow?
- 6. If the spinner is spun 100 times, what is the average number of times it would stop on Red? \_\_\_\_\_



**Spinner Colors** 

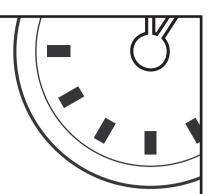
- **7.** The spinner will land on Blue or Green about half the time on average. Circle: True or False
- 8.  $-3 + \frac{-12}{-2} =$
- **Q.** Look at the chart to the right and write the function rule. y =\_\_\_\_\_
- **10.** Using the chart in Problem 9, if x = -3, then y =\_\_\_\_.

x	у
1	3
2	6
3	9









2 2 2 4

0689 4 3 4 5 6 5 2

**KEY** 

4|3 represents 4.3

## MINUTE 72

For Problems 1–3, use the stem-leaf plot to the right.

- How many times does the number 2.2 show up? \_\_\_\_\_
- How many numbers are between 4.5 and 5.0?
- 3. What is the range (biggest number–smallest number) of the plot? \_\_\_\_\_
- -8 Complete this subtraction table. -14
- Which of these fractions is closest to zero? \_\_\_\_\_ **b.**  $\frac{1}{10}$  **c.**  $\frac{2}{50}$  **d.**  $\frac{9}{10}$

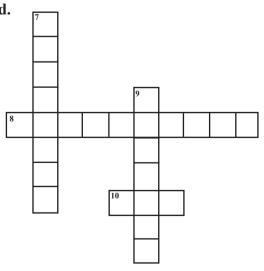
- 6. Which of these shapes has the most sides? \_\_\_\_\_
  - a. decagon
- **b.** octagon
- c. pentagon

79

d. hexagon

For Problems 7–10, use the clues to complete the crossword.

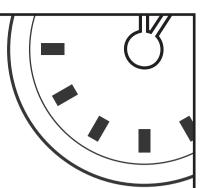
- The answer to a division problem.
- The answer to a subtraction problem.
- The answer to a multiplication problem.
- 10. The answer to an addition problem.



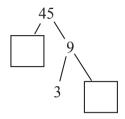








**1.** Complete this factor tree.



**2.** Use •, +, -, or ÷ to complete. 
$$3 \boxed{12} \boxed{4=6}$$

**3.** If 
$$y + 1.7 = 1$$
, then  $y =$ \_\_\_\_.

**4.** If 
$$d = 3$$
, does  $d + d + d = 3d$ ?

Circle: Yes or No

**6.** If 
$$\pi = 3.14$$
, then  $10\pi =$ \_\_\_\_.

For Problems 7–10, match each expression with an equivalent expression.

**a.** 
$$\frac{a}{3}$$

**8.** 
$$a + a + a$$

**9.** 
$$a \div 3$$

**10.** 
$$a-a-a$$

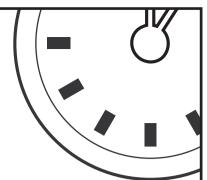
$$\mathbf{d.} \ a^3$$

80











Put the numbers 23, 35, 26, 38, and 39 into the stem-leaf plot to the right.

2		
3		

- **2.** What is the median number in Problem 1?
- **3.** Fill in the missing number in the box.

$$3 \xrightarrow{6 \longrightarrow 9 \longrightarrow 12 \longrightarrow 15}$$

$$6 \longrightarrow 12 \longrightarrow 24 \longrightarrow$$

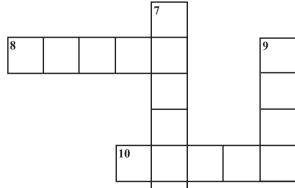
**4.** The numbers in the boxes are all multiples of 4 that are less than 40. Fill in the missing number.

4	36	16
12		32
28	8	20

- **5.** What is the sum of row 1 in the chart in Problem 4? \_\_\_\_\_
- **6.** If the time is 4:40, what time was it 70 minutes ago?

For Problems 7–10, use the clues to complete the crossword.

**7.** The number in the middle of an ordered group.

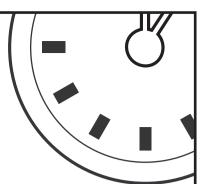


- **8.** An angle that is less than 90 degrees.
- **9.** The number in a group that shows up the most often.
- **10.** The largest number in a group minus the smallest.









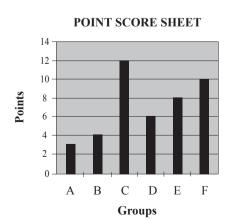
- Write in the simplest form:  $\frac{16}{20}$  =
- **2.** Estimate:  $42 \times 58 \approx$  \_\_\_\_\_. (**Hint:** "\approx" means "approximately")
- **3.** What number times 7 equals negative 56? \_\_\_\_\_
- **4.** How many dimes are in \$6.00?
- **5.** Complete this addition table.

+	-4	-5
-6	-10	
-7		-12

- 6. How many cookies are in 3.5 dozen?
- **?.** The distance around a circle is sometimes referred to as \_\_\_\_\_.
  - a. diameter
- **b.** radius
- **c.** circumference
- **d.** pi

#### For Problems 8–10, use the graph to the right.

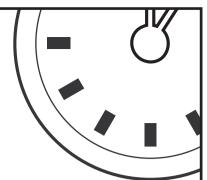
- According to the graph, group \_\_\_\_\_
  has twice as many points as group D and \_\_\_\_\_ times as many points as group B.
- **9.** Group \_\_\_\_\_ has half as many points as group E.
- **10.** Altogether, groups A, B, and C have a total of \_\_\_\_\_ points.











- 1. How many fourths are in  $5\frac{1}{2}$ ?
- **2.** If four apples cost \$0.40, how much would six apples cost?
- **3.** If a triangle has a 50 degree angle and a 60 degree angle, how many degrees is the third angle? \_\_\_\_\_
- **4.** A \$30 shirt is 50% off. What is the new price?
- **5.** What is your change from a \$20 bill if your dinner costs \$11.80? \_\_\_\_\_

For Problems 6–8, use the stem-leaf plot to the right.

- **6.** What was the highest score recorded?
- **?.** What was the lowest score recorded?
- **8.** What was the mode score?

**Bowling Scores** 

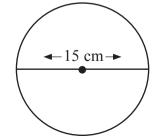
- **10** | 5 6
- 11 2 2
- **12** 1 1 7
- 14 2
- 14 | 2 6
- **15** 1 3 3
- **16** 0 4 4 4 4
- 17 2 5 5 7
- **18**|6-6-7
- 9 | 2
- 0 5

KEY 15|1 represents 151

**9.** Fill in the missing numbers to complete the pattern.

_	_	_		_		_		
2	7	2	11	2	15	2		
					_		l	l

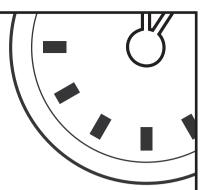
**10.** What is the radius of this circle?





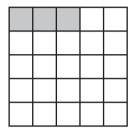






For Problems 1–2, use the grid to the right.

- If two more of the squares were shaded, what total percent would be shaded? \_\_\_\_\_
- How many small cubes placed on top of the grid, fitting exactly on the squares, would it take to make a large cube?

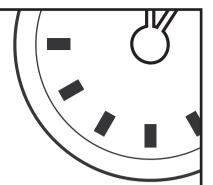


- $5^2 33 =$
- 4. How many thirds are in 7? \_\_\_\_\_
- **5.** What is the perimeter of a 5 in. × 9 in. picture frame?
- **6.** Would a 40 in.<sup>2</sup> picture fill a 5 in. × 9 in. picture frame? Circle: Yes or No

For Problems 7-10, match each statement with its correct algebraic expression.

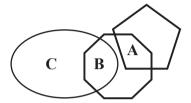
- **7.** three more than a number squared **a.**  $\frac{1}{3}n$
- **8.** three less than twice a number **b.**  $\frac{n^3}{3}$
- **10.** one-third of a number  $\mathbf{d.} 2n 3$





For Problems 1–3, use the diagram to the right.

Which letter is inside the pentagon and the octagon? \_\_\_\_\_



- **2.** Which letter is inside the octagon and the oval? \_\_\_\_\_
- **3.** Which letter is outside the octagon and the pentagon? \_\_\_\_\_
- **4.** Bananas cost 50 cents each and oranges cost 75 cents each. How much will two of each cost? \_\_\_\_\_
- **5.** What is the mean of 30 and 50? \_\_\_\_\_
- **6.** A \$40 jacket is 25% off. How much will you save?

For Problems 7–8, use the table to the right.

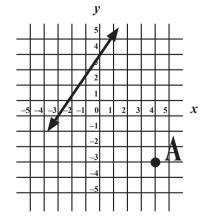
**?.** What is the sum of the numbers in row B? \_\_\_\_\_

A	-3	5	-4
В	-2	-6	-8
C	-1	0	7

**&.** What is the product of the numbers in row A? \_\_\_\_\_

For Problems 9–10, use the graph to the right.

**9.** In what quadrant is point A located? \_\_\_\_\_

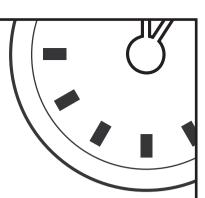


**10.** What is the *y*-intercept of the line?





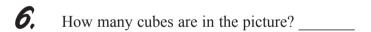




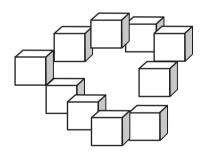
For Problems 1-3, use the Venn diagram to the right.

- **1.** What number is in all three circles?
- Which number(s) are in both circles A and B?
- 3. How many different numbers are in circles A and C? \_\_\_\_\_
- **4.** What is the interest for one year at 10% on \$2,500?

For Problems 6–7, use the picture to the right.



**?.** If each cube has six faces, how many total faces are in this picture? \_\_\_\_\_



 $\mathbf{C}$ 

B

For Problems 8–10, estimate to find the best answer.

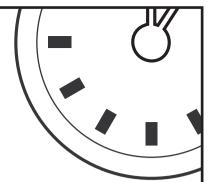
$$82 \times 41 =$$

$$148 \div 5 =$$









- If it is 10:46 a.m., how many minutes until noon?
- 2. Mark has a string that is six feet long. If he cuts it in half and then cuts each half in half, how long will each piece be? \_\_\_\_\_

For Problems 3-6, circle three items that are of equal value.

$$10^2$$





Pentagon



**6.** 
$$1.265 \times 10^2$$

$$1.265 \times 10^2$$
  $0.1265 \times 10^3$   $12.65 \times 10^1$   $1.265 \times 10^3$ 

$$12.65 \times 10^{1}$$

$$1.265 \times 10^{3}$$

$$0.1265 \times 10^4$$

- If Jerome walks 1.6 miles to school each day, how long is the round-trip?
- 8. How many legs do six chickens and four cows have in total?
- 9. Fill in the missing squared numbers.

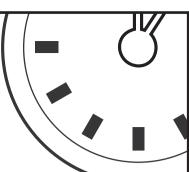
1	4	9	16	

- 10. NET is to TEN as 304 is to:
  - **a.** 340
- **b.** 430
- **c.** 403
- **d.** 304









- $0.25 + 50\% \frac{1}{10} =$
- **2.** Using the numbers 2, 6, 5, 1, and 8, fill in the lines below to create the greatest number possible.

For Problems 3–5, use >, <, or =.

- $3. \quad \sqrt{36} \quad$  -8
- **4.** 0.4<del>6</del> \_\_\_\_\_ 0.48
- **5.** Obtuse Angle \_\_\_\_\_ Acute Angle
- 6. The letter M has two \_\_\_\_\_ lines. Circle: Parallel or Perpendicular

For Problems 7–10, fill in the boxes to complete the correct math equations.

7						
÷						
-5		8 -4				
=		•				
9 -9	÷	2	•	6	II	
		=				
		10	+	-7	=	

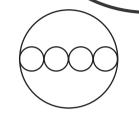








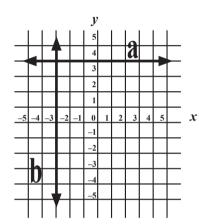
If the diameter of the largest circle is 40, what is the diameter of the smaller circles? \_\_\_\_\_ (Hint: All small circles are congruent.)



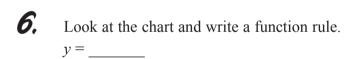
For Problems 2–5, use the coordinate grid to the right.

**2.** Line *a* and line *b* are \_\_\_\_\_.

Circle: parallel or perpendicular



- **3.** Where do lines *a* and *b* intersect?
- 4. In which quadrant do the lines intersect?
- 5. If (x, y) is a point in Quadrant I, then (-x, -y) is in : Circle: Quadrant II Quadrant III Quadrant IV



x	у
1	4
5	8
10	13

**?.** Which of the following would be the next term in this sequence?

Ab5, Cd7, Ef9, \_\_\_\_\_

**a.** GH11

**b.** Gh13

**c.** Gh11

**d.** GH13

360

For Problems 8–10, shade the box with the best equivalent fact.

- **8.** 1 yard
- **9.** Degrees in a triangle

10.	Degrees	in a	quadrilateral
-----	---------	------	---------------

24 inches	4 feet	36 inches	
180	90	360	

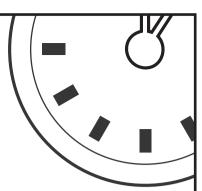
90

180









- MINUTE 83
- If a snail moves six feet in 15 minutes, how far will it go in two hours?
- 2. Use the digits 1, 6, and 7 to fill in the remaining squares so that no two consecutive numbers are beside each other vertically, horizontally, or diagonally.

3	5	
	8	2
4		

For Problems 3-6, use the Venn diagram to the right.

3. In a recent television survey, only two people preferred all three brands (A, B, C).

> Circle: True or False

Eight people preferred brands A and B.

or

True

Seven people preferred brand A only. Circle: True or False

False

6. Five people preferred brands C and B, but not brand A. Circle: True or False

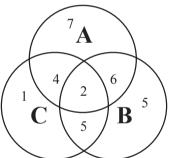
$$20\% + \frac{2}{5} + 0.08 =$$

Circle:

8. 
$$\sqrt{2^2+5} =$$

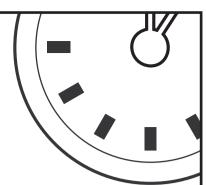
**9.** 
$$\sqrt{4} \cdot \sqrt{9} =$$

10. I am an even number less than 30 but more than 20. I am also a multiple of 3. What number am I?

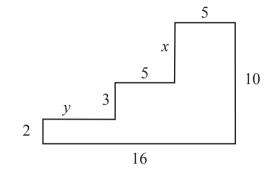








For Problems 1–3, use the shape to the right.



**3.** What is the perimeter of the shape? \_\_\_\_\_

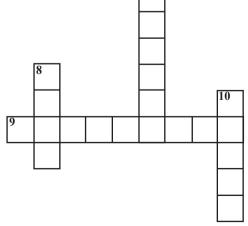
**4.** If 
$$\frac{6}{42} = \frac{n}{7}$$
, then  $n =$ \_\_\_\_\_.

**6.** 
$$30\% + \frac{1}{5} + 0.12 =$$

For Problems 7–10, use the following clues to complete the crossword.

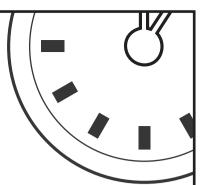
91

- **7.** The amount of three-dimensional space taken up by an object.
- **8.** The amount of square units inside a shape.
- **9.** The distance around a shape.
- **10.** A number that can only be divided by 1 and itself.









- The letter has \_\_\_\_\_ lines.
  - a. parallel
- **b.** perpendicular **c.** both parallel and perpendicular
- 2. There are four aces in a deck of 52 cards. What are the chances of drawing an ace from a deck on one draw?
- 3. Write 7.25 as a fraction.
- $5 + 5 \bullet 5 5 \div 5 =$
- 5. Ellen likes to draw pentagons and hexagons. Her paper has a total of 39 sides. If there are four hexagons, how many pentagons are there?
- If d 3.6 = 7.4, then d =.
- To turn 168 hours into days, you should . **b.** multiply by 24 **c.** divide by 24 **d.** multiply by 7 **a.** divide by 60

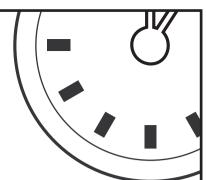
For Problems 8-10, use the chart to the right.

1 qt. = 
$$2 pt$$
.

$$1 \text{ pt.} = 16 \text{ oz}$$



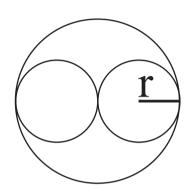




1. If the time is 2:12 p.m., then how many minutes ago did the time turn to noon?

For Problems 2–3, use the picture to the right.

- **2.** The diameter of the largest circle is 24. What is the radius of the smaller circles? \_\_\_\_\_
- **3.** What is the diameter of the smaller circle?



For Problems 4–6, evaluate if a = 3 and b = 4.

4. 
$$a^2 + b^2 =$$

$$5. \quad \sqrt{a^2 + b^2} =$$

**6.** 
$$(ab)^2 =$$

For Problems 7–10, use the chart to the right.

In which quadrant would the point  $(x_2, y_2)$  be? \_\_\_\_\_

$x_{_{I}}$	$x_{2}$	$y_{_{I}}$	$y_2$
2	-2	12	4

- **8.** Solve:  $y_2 y_1 =$
- **9.** Solve:  $x_2 x_1 =$
- 10. Find the slope of the line that contains the points listed in the chart.

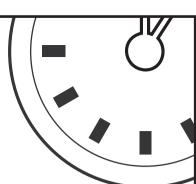
93

$$slope = \frac{y_2 - y_1}{x_2 - x_1} =$$









For Problems 1–3, use the grid to the right.

- **!** What is the sum of column A? \_\_\_\_\_
- **2.** What is the product of column B? \_\_\_\_\_
- **3.** What is the product of column C? \_\_\_\_\_
- $4. \quad 75\% + \frac{1}{10} + 0.02 =$
- $5. \quad \sqrt{6^2 + 8^2} =$
- **6.** Which of the following shapes would be next in the pattern?



B

-1

A

-2

5

-8

 $\mathbf{C}$ 

10



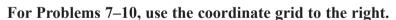
b.



c.

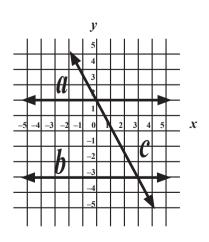


d.



- **7.** Lines *a* and *b* are \_\_\_\_\_.

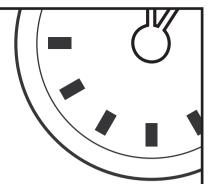
  Circle: parallel or perpendicular
- **8.** Lines *a* and *c* intersect at (\_\_\_\_\_\_, \_\_\_\_\_).
- **9.** Lines b and c intersect in Quadrant \_\_\_\_\_.
- **10.** Line b has a y-intercept of \_\_\_\_\_.











- To solve the equation 2x 3 = 9, you should first \_\_\_\_\_.
  - **a.** add 3
- **b.** subtract 3
- **c.** divide by 2
- **d.** multiply by 2
- 2. The price of a \$40 jacket is marked down to \$30. What percent off is the jacket?
- In order to find 34% of 410, you should .
- **a.** multiply 0.34 by 410 **b.** divide 0.34 by 410 **c.** multiply 0.034 by 410 **d.** divide 0.034 by 410

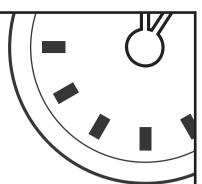
- 5.  $2\sqrt{49} =$
- 6. Is the  $\sqrt{11}$  closer to 3 or 4?
- What is another way to write  $a \bullet a \bullet a \bullet a$ ?
- $\frac{4 \bullet 6 \bullet 7 \bullet 2}{6 \bullet 14} =$
- 10. If Rob made 7 out of 10 shots in a basketball game, what percent of shots did he miss? \_\_\_\_\_

95









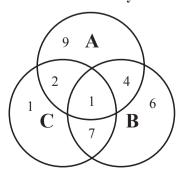
- Write  $3 \cdot 3 \cdot 3 \cdot 3 \cdot 5 \cdot 5$  using exponents:
- 2. Which of the following is equal to  $2^3 \cdot 2^2$ ?
  - a.  $2^6$
- **b.**  $2^5$
- **d.**  $2^4$

- $2(4+1)^2 =$
- 5(0.7 + 0.4) =
- 5. Which value of *n* will make 4n > 22 true?
  - **a.** 4
- **b.** 5
- **c.** 6
- **d.** -5
- If |-5| = 5, then |-12| =.
- If  $y = x^2$  and x = 4, then  $y = _____$ .
- 8. Which of the following is the greatest number?
  - **a.**  $4^2$
- **b.**  $2^4$  **c.**  $\frac{50}{2}$
- d. three dozens

#### For Problems 9–10, use the Venn diagram to the right.

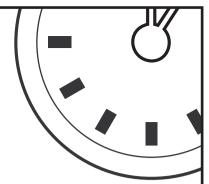
- In a recent food survey, how many people preferred all three brands? \_\_\_\_\_
- 10. Seven people preferred brands and .

#### **Food Survey**

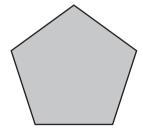








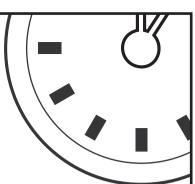
- On Tuesday, Joe lost \$10. On Wednesday, he made \$5. On Thursday, he made \$4. Did he make or lose money over those three days?
- **2.** -3(-4 + -3) =
- **3.** Original price: \$100 New Price: \$72 What is the % decrease? \_\_\_\_\_
- When dividing fractions, you must flip the \_\_\_\_\_ fraction over and then multiply the resulting fractions. Circle: first or second
- **5.**  $\left[\frac{3}{8}\right]\left[-\frac{5}{7}\right] =$
- 6. Which one of the following is equal to 12%?
  - **a.**  $\frac{12}{100}$
- **b.**  $\frac{6}{50}$
- **c.** 0.12
- **d.** 0.012
- **?.** Write using exponents:  $4^2 \cdot 4 \cdot 4 \cdot 4 =$
- **8.** |-15| =
- **9.** How many halves are in 13? \_\_\_\_\_
- **10.** What is the perimeter of this regular pentagon if each side is 1.3 inches?











Which one of the following problems is incorrect?

$$a. -2 + -3 = -5$$

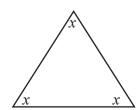
**b.** 
$$-2 \cdot -3 = -6$$

$$c_{-8} \div -2 = 4$$

**a.** 
$$-2 + -3 = -5$$
 **b.**  $-2 \cdot -3 = -6$  **c.**  $-8 \div -2 = 4$  **d.**  $-4 - (-6) = 2$ 

**3.** Reduce: 
$$\frac{20}{50} =$$

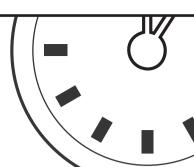
- What percent is  $\frac{20}{50}$ ?
- Write as a decimal:  $\frac{20}{50}$  = 5.
- 6. Which is greater, the mean or median of the numbers 1, 3, and 8?
- Write as an improper fraction:  $3\frac{2}{7}$  =
- If  $\frac{3}{4} = \frac{x}{36}$ , then x =\_\_\_\_\_.
- 9. Find three prime numbers whose product is 30. \_\_\_\_\_, \_\_\_\_,
- 10. If all three angles of this triangle are equal, then x =.



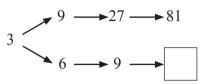








**7.** Fill in the missing number in the box.



**2.** Complete this times table.

×	-4	-5
-6	24	
7		-35

**3.** Write as an improper fraction:  $14\frac{1}{2} =$ 

For Problems 4–6, use the graph to the right.

**4.** What percent of the graph does category B represent?



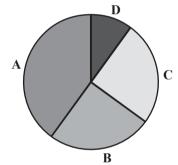
**b.** 50%

**c.** 75%

99

**d.** 10%

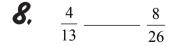
**5.** If categories A, B, and C represent 90%, then category D represents \_\_\_\_\_.



**6.** Categories B and C appear to represent % of the graph.

$$\frac{20}{2}$$
 =

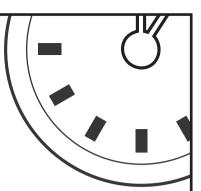
For Problems 8–10, use >, <, or =.











For Problems 1–3, use the chart to the right.

 $y_2 - y_1 =$ 

r - r =		

$x_{_{I}}$	$x_{2}$	<i>y</i> <sub>1</sub>	<i>y</i> <sub>2</sub>
2	-1	-3	6

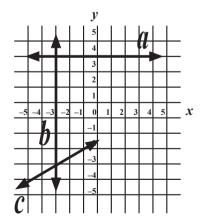
- **3.** Find the slope of the line that contains the points from Problems 1 and 2.
- 4. Put these in order from least to greatest: -5, -7, |-5|, 0.
- **5.**  $4^3 \cdot 4^8 =$
- 6. If two angles in a triangle are 60° and 100°, is the third angle acute, obtuse, or right?
- $3(14+3 \cdot 12) =$

For Problems 8–10, use the coordinate grid to the right.

**8.** At what coordinates do the lines *a* and *b* intersect?



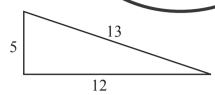
**10.** Will line c intersect line a? Circle: Yes or No





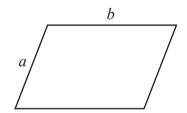


Which number is the length of this hypotenuse? \_\_\_\_\_



For Problems 2-4, use the parallelogram to the right.

**2.** Using the letters on the parallelogram, what is the perimeter? \_\_\_\_\_



- **3.** Using the letters on the parallelogram, what is the area? \_\_\_\_\_
- 4. If a = 7 and b = 10, the perimeter of the parallelogram is \_\_\_\_\_.
- **5.** Fill in the missing numbers in this chart to complete the pattern.

4		16	24

For Problems 6–10, match each equation with its correct answer.

**6.** 
$$3n = -63$$

**a.** 
$$n = -24$$

$$\frac{n}{-4} = 9$$

**b.** 
$$n = 6$$

**8.** 
$$2(n+3)=20$$

**c.** 
$$n = 7$$

**9.** 
$$0.5n = -12$$

**d.** 
$$n = -21$$

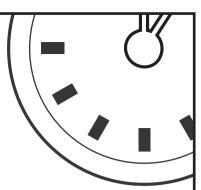
**10.** 
$$n^2 = 36$$

**e.** 
$$n = -36$$









If Jenny's bill for her dinner is \$32, how much should she leave for a 20% tip? \_\_\_\_\_

$$2. \quad \frac{1}{4} + 30\% + 0.02 =$$

$$3. \quad \left[\frac{3}{9}\right] \left[-\frac{6}{3}\right] =$$

$$(-4) \bullet (-6) =$$
  $(-7) \bullet (8) =$   $(4) \bullet (-9) =$ 

$$5. \quad \sqrt{\sqrt{16}} =$$

For Problems 6–7, use the square to the right.

6. If the length of a side of the square is a units, what is its perimeter? \_\_\_\_\_



What is the area of the square if a = 7 units?

**8.** If 
$$x = 2$$
, then  $2x^2 - x =$ \_\_\_\_\_.

9. Use y = 3x + 5 to complete this chart.

x	у
-2	
5	
-4	

10. What four numbers are shown by this stem-leaf plot? \_\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

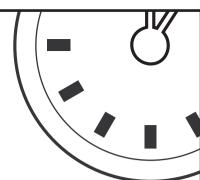
$$KEY$$

$$1|5 = 15$$

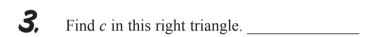


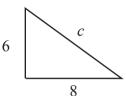






- MINUTE 96
- 7. Original price: \$50 Final price: \$60 The percent increase in price is\_\_\_\_\_\_
- $(3^2)^2 =$





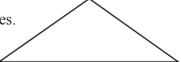
**4.** Complete this chart.

Sum	Product	Numbers
8	12	2 and 6
		3 and 8

**5.** If two angles in a triangle are 60° and 30°, is the third angle acute, obtuse, or right? \_\_\_\_\_

**6.** 
$$-3(14+3 \cdot (-4))=$$

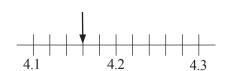
**7.** Draw a line on this isosceles triangle to make two right triangles.



8. If the letter A is rotated 90° clockwise, what will it look like?

103

**9.** What number is the arrow pointing toward? \_\_\_\_\_

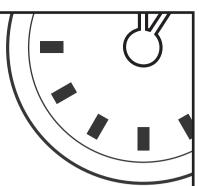


**10.**  $\frac{\frac{6}{2}}{\frac{1}{3}} =$ 









- $\frac{3}{14}$ . Circle the fraction that is greater than  $\frac{3}{14}$ .
  - a.  $\frac{3}{20}$

**b.**  $\frac{3}{15}$ 

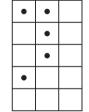
- c.  $\frac{1}{4}$
- **d.**  $\frac{1}{7}$
- **2.** Circle the measurement that is greater than 1 yard.
  - **a.** 1 foot
- **b.** 13 inches
- c. 5 feet
- d. 2 feet

- **3.** Circle the amount that is greater than 0.06.
  - **a.** 0.061
- **b.** 0.006
- c.  $\frac{1}{1,000}$
- **d.** 4%

- **4.** Circle the shape with more than nine sides.
  - a. pentagon
- **b.** hexagon
- c. octagon
- d. decagon

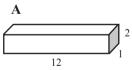
#### For Problems 5–6, use the figure to the right.

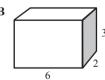
**5.** What percent of the squares have a black dot in them?



- 6. How many more black dots should be added so that  $\frac{2}{3}$  of the squares would be filled?
- A garden hose will be filling these boxes with water. Which box will take longer to

fill? \_\_\_\_\_



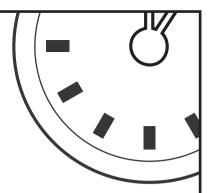


**8.** Fill in the missing numbers to complete the pattern.



- **9.** 2 × 8 = 208
- 10.  $\sqrt{81} =$

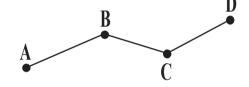




- 1. On Saturday, Justin drove 52 miles per hour for three hours. How far did he go?
- Atlanta's population is two million, eight hundred thirty-three thousand, five hundred eleven. Write this number in standard form (using numbers).

For Problems 3-5, use the map and chart to the right.

**3.** What is the road distance between towns A and C?



- **4.** What is the road distance between towns B and D?
- **5.** If Marie rides her bike at a rate of seven miles per hour, how long will it take her to get from town A to town D?

From	To	Distance
A	В	12 miles
В	С	7 miles
С	D	9 miles

For Problems 6–10, match each statement with its correct answer.

**6.** -4 · 36

**a.** -84

**?.** square root of 121

**b.** 144

**8.** 15% of 60

**c.** 11

**9.** -42 ÷ 0.5

**d.** 9

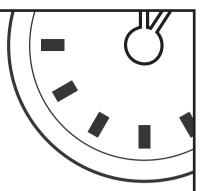
**10.** 12<sup>2</sup>

**e.** -144









#### For Problems 1–3, use the chart to the right.

- **1.** Beth needs to rent a bike and tent for two days. How much will this cost her?
- **2.** Bryce needs to rent a backpack, canoe, and tent for three days. How much will this cost him?

**Bob's Camping Rental Store** 

<b>Camping Supplies</b>	Price Per Day
Mountain Bikes	\$25
Climbing Gear	\$15
Tents	\$20
Canoes	\$30
Backpacks	\$10

- **3.** Bob will offer a 10% discount if you rent an item for five or more days. How much would a tent cost to rent for five days?
- **4.** Circle the numbers that are composite.

10

16

21

23

25

29

30

**5.** Circle the number that is NOT divisible by 6.

12

15

18

24

30

36

48

#### For Problems 6-10, circle Always true, Sometimes true, or Never true.

**6.** The radius of a circle is half the diameter.

Always true

Sometimes true

Never true

**?.** A negative plus a positive is a negative.

Always true

Sometimes true

Never true

**8.** The diameter of a circle passes through the center of a circle.

Always true

Sometimes true

Never true

**9.** A negative times a negative is a negative.

Always true

Sometimes true

Never true

**10.** The perimeter of a shape is more than its area.

Always true

Sometimes true

Never true



For Problems 1–4, circle *True* or *False*.

1. 
$$\frac{4}{5} = \frac{12}{16}$$

True or False

**2.** If two triangles are similar, their sides are the same length.

True or False

3. If the rate is consistent, 9 miles in 10 minutes = 4.5 miles in 5 minutes.

True or False

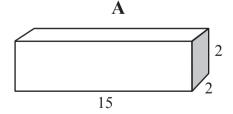
**4.** If  $\frac{x}{15} = \frac{9}{45}$ , then x = 3.

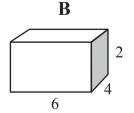
True or False

For Problems 5–8, circle the correct measurement.

- **5.** The platform diving board is 33 (feet, inches, miles) high.
- 6. In tennis, it is possible for the ball to travel over 100 (miles, inches, feet) per hour.
- **7.** In gymnastics, the balance beam is only 4 (inches, feet, yards) wide.
- **8.** A softball weighs just under 7 (ounces, pounds, tons).
- **9.** A hose will fill these boxes with water. Which box will take longer to fill?

107





**10.** What percent of the squares have a black dot in them?