# SIXTH-GRADE Math Minutes 

One Hundred Minutes to Better Basic Skills

## Written by <br> Doug Stoffel

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The focus of Sixth-Grade Math Minutes is math fluency-teaching students to solve problems effortlessly and rapidly. The problems in this book provide students with practice in every key area of sixth-grade math instruction, including

- computation
- number sense
- reading graphs
- problem solving
- patterns and sequences
- data analysis and probability
- spatial reasoning
- fractions
- algebra and functions
- geometry

Use this comprehensive resource to improve your students' overall math fluency, which will promote greater self-confidence in their math skills as well as provide the everyday practice necessary to succeed in testing situations.

Sixth-Grade Math Minutes features 100 "Minutes." Each Minute consists of 10 classroom-tested problems of varying degrees of difficulty for students to complete within a one- to two-minute period. This unique format offers students an ongoing opportunity to improve their own fluency in a manageable, nonthreatening format. The quick, timed format, combined with instant feedback, makes this a challenging and motivational assignment students will look forward to using each day. Students become active learners as they discover mathematical relationships and apply acquired understanding to complex situations and to the solution of realistic problems in each Minute.


Sixth-Grade Math Minutes is designed to be implemented in numerical order, starting with Minute One. Students who need the most support will find the order in which skills are introduced most helpful in building and retaining confidence and success. For example, the first few times that students are asked to recognize rows and columns in a table, the particular row or column is shaded. Later the students are asked to recognize a particular row or column without the aid of shading.

Sixth-Grade Math Minutes can be used in a variety of ways. Use one Minute a day as a warm-up activity, bell work, review, assessment, or homework assignment. Other uses include incentive projects and extra credit. Keep in mind that students will get the most benefit from their daily Minute if they receive immediate feedback. If you assign the Minute as homework, correct it in class as soon as students are settled at the beginning of the day.

If you use the Minute as a timed activity, place the paper facedown on the students' desks or display it as a transparency. Use a clock or kitchen timer to measure one minute - or more if needed. As the Minutes become more advanced, use your discretion on extending the time frame to several minutes if needed. Encourage students to concentrate on completing each problem successfully and not to dwell on problems they cannot complete. At the end of the allotted time, have the students stop working. Then read the answers from the answer key (pages 108-112) or display them on a transparency. Have students correct their own work and record their scores on the Minute Journal reproducible (page 6). Then have the class go over each problem together to discuss the solution(s). Spend more time on problems that were clearly challenging for most of the class. Tell students that concepts that seemed difficult for them will appear again on future Minutes and that they will have another opportunity for success.



Teach students strategies for improving their scores, especially if you time their work on each Minute. Include strategies such as the following:

- leave more time-consuming problems for last
- come back to problems they are unsure of after they have completed all other problems
- make educated guesses when they encounter problems with which they are unfamiliar
- rewrite word problems as number problems
- use mental math whenever possible
- underline important information
- draw pictures

Students will ultimately learn to apply these strategies to other timed-test situations.

The Minutes are designed to improve math fluency and should not be included as part of a student's overall math grade. However, the Minutes provide an excellent opportunity for you to see which skills the class as a whole needs to practice or review. This information will help you plan the content of future math lessons. A class that consistently has difficulty reading graphs, for example, may make excellent use of your lesson in that area, especially if the students know they will have another opportunity to achieve success in reading graphs on a future Minute. Have students file their Math Journal and Minutes for the week in a location accessible to you both. You will find that math skills that require review will be revealed during class discussions of each Minute. You may find it useful to review the week's Minutes again at the end of the week with the class before sending them home with students.

While you will not include student Minute scores in your formal grading, you may wish to recognize improvements by awarding additional privileges or offering a reward if the entire class scores above a certain level for a week or more. Showing students that you recognize their efforts provides additional motivation to succeed.


NAME $\qquad$

| N | $\begin{aligned} & \text { 5 } \\ & \text { 5 } \end{aligned}$ | $\begin{aligned} & \text { む̌ } \\ & \text { ぶ } \end{aligned}$ | N | $\begin{gathered} \text { N } \\ 0 \end{gathered}$ | $\begin{aligned} & \text { む̌ } \\ & \text { c } \end{aligned}$ | $\begin{aligned} & \text { n } \\ & \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { に } \\ & \text { है } \end{aligned}$ | $\begin{aligned} & \text { む̌ } \\ & \text { ぶ } \end{aligned}$ |  | $\begin{aligned} & \text { w } \\ & \frac{1}{2} \end{aligned}$ | \％ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  | 26 |  |  | 51 |  |  | 76 |  |  |
| 2 |  |  | 27 |  |  | 52 |  |  | 71 |  |  |
| 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 |  |  | 70 |  |  | 95 |  |  |
| 21 |  |  | 46 |  |  | 71 |  |  | 96 |  |  |
| 22 |  |  | 47 |  |  | 72 |  |  | 97 |  |  |
| 23 |  |  | 48 |  |  | 73 |  |  | 98 |  |  |
| 24 |  |  | 49 |  |  | 74 |  |  | 99 |  |  |
| 25 |  |  | 50 |  |  | 75 |  |  | 100 |  |  |


$\qquad$


## Minute in which SKILL FIRST APPEARS <br> SKILL

 SKILLPlace Value
1
Fractions, Decimals, and Percents
(ordering, comparing, recognizing)
Fractions (naming, identifying, comparing, reducing)
Graphs (bar, line, circle, frequency charts)
1

Patterns/Sequences 1
Computation (add, subtract, multiply, divide) 1
Area of Shapes
Simple Probability and Odds
Simple Geometry and Shape Recognition
Perimeter
Time (clock, calendar) 3
Spatial Reasoning 3
Story Problems and Reasoning
Decimals (expressing, addition, subtraction, multiplication, division)
Number Sense/Reasonable Answers
Geometry (congruent/similar/shapes/vertices/
sides/degrees, vocabulary)
Simple Algebraic Expressions/Substitutions
Money
Rounding
Simple Functions
Solving Simple Equations
11
Volume (boxes) 11
Ratios 12
Changing Fractions, Decimals, and Percents 14
Order of Operations1757
Venn Diagrams ..... 20
Symmetry ..... 22
1 Working with Rows and Columns ..... 22
Fractions (mixed and improper) ..... 26
1 Geometry (circles/radii/diameters/hypotenuse) ..... 27
Estimation ..... 41
Multiples ..... 42
Bar Notation ..... 44
Factors and Factor Trees ..... 47
Geometry (angles and degrees in a triangle) ..... 51
Squares, Square Roots, and Exponents ..... 51
Simple Permutations and Combinations ..... 52
Number Lines ..... 54
3 Primes ..... 55
3 Solving Two-Step Equations ..... 57
Analogies ..... 574 Coordinate Graphs (quadrants, graphing,
points, lines, distance) ..... 63
Integers (add, subtract, multiply, divide) ..... 63
5 ..... 66
Midpoints ..... 70
8 Solutions to Inequalities ..... 78
Greatest Common Factor Greatest Common Factor ..... 83
Mean ..... 85


1. Circle the number that has a 4 in the tens place. $\begin{array}{lllll}324 & 24 & 4,321 & 49\end{array}$
2. Circle the set of lines that are parallel.

$\qquad$
3. Write these decimals in order from least to gr
4. Write the fraction that represents the shaded boxes.

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |

$\qquad$
5. $5+\square=12$
6. Complete the pattern: $1,5,9,13$, $\qquad$ .
7. What is the area (number of squares) in the rectangle to the right?

$\qquad$

9.
$9 \times 4=$
8. According to the chart, how many desks are in column A?
$\qquad$
$9 \times 7=$
$9 \times 9=$
10. $7 \longdiv { 2 8 } =$
$7 \longdiv { 4 2 } =$
$7 \longdiv { 6 3 } =$


1. If you flip a coin 10 times, how many times will it land on heads?
a. 10
b. 5
c. 2
d. impossible to tell
2. Which shape is a pentagon?
a.

b.

c.

d.

3. Write the fraction for each:

Two-fifths = $\qquad$
Three-fourths = $\qquad$
4. Write the fraction that represents the shaded boxes.

5. $3 \times 4+4=$
6. Complete the pattern: $4,8,12,16$, $\qquad$ .
7. What is the perimeter (distance around) of the rectangle to the right? $\qquad$ .

8. According to the graph to the right:

$$
\mathrm{A}=
$$

$\qquad$
$B=$ $\qquad$
$\mathrm{C}=$ $\qquad$

9. $8 \cdot 6=$
$8 \cdot 4=$
$8 \cdot 7=$
10. $\frac{24}{6}=$
$\frac{36}{6}=$

$$
\frac{18}{6}=
$$



1. If it is $5: 32$ now, what time will it be 24 minutes from now? $\qquad$
2. How many cubes are in this shape? $\qquad$

3. Write two fractions that represent the shaded boxes.

4. Write > or < in the circle to compare the fractions.

5. Mel makes arm bracelets. She is making one for each arm of her six friends. How many should she make? $\qquad$
G. Complete the pattern. 2, 4, 8, $\qquad$ .
6. Joe wants to build a fence for his dog Charlie. He plans to surround the rectangle to the right with fence. How many feet will he need? $\qquad$

7. How many people took part in this survey?
$\qquad$
8. $\begin{aligned} & (12)(3)= \\ & (12)(5)= \\ & (12)(6)=\end{aligned}$

9. $50 \div 5=$

$$
55 \div 5=
$$

$$
45 \div 5=
$$



1. Circle the number with a 5 in the tenths place. $\begin{array}{llllll} & 36.05 & 41.5 & 50.313 & 15.38\end{array}$
2. Which of these shapes is a trapezoid?
a. $\square$
b.

c.

d.


For Problems 3-4, write $>$, <, or =. Use the bars to help you.

5. $2(4+7)=$
6. Complete the pattern. 123, 234, 345, $\qquad$ .
7. Justin has 30 feet of fence. Would this be enough to surround his garden? Circle: Yes or No

8. According to the chart, Brand B was chosen twice as often as Brand $\qquad$ -.

$$
\text { 9. } \quad \begin{array}{r}
1+2+3= \\
3+4+5= \\
5+6+7=
\end{array}
$$




1. The height of a room would most likely be 10 $\qquad$ .
a. feet
b. inches
c. yards
2. Which letter on the shape is beside a right angle? $\qquad$

3. $\frac{1}{2}$ of $20=$
4. Write as a decimal: two and three-tenths = $\qquad$ .
5. If the pattern continues, how many boxes should be shaded in row D ? $\qquad$

6. $(2 \times 3)+(3 \times 4)=$
7. What is the area of the shape to the right? $\qquad$

8. In the chart to the right, the $y$ numbers are $\qquad$ times the $x$ numbers.

| $\boldsymbol{x}$ | 1 | 2 | 4 |
| :---: | :---: | :---: | :---: |
| $\boldsymbol{y}$ | 3 | 6 | 12 |

9. 

$$
\begin{array}{rr}
49 & 51 \\
-28 & -32 \\
\hline
\end{array}
$$

$\times 5$
$\times 7$


1. To build a school, it might take two $\qquad$ .
a. days
b. weeks
c. years
2. Which letter on the shape is beside an obtuse angle? $\qquad$

3. Which of the following is (are) equal to $\frac{1}{2}$ ?
a. $\frac{5}{10}$
b. $\frac{7}{14}$
c. $\frac{10}{25}$
d. $\frac{12}{30}$
4. Write as a decimal: twenty-three hundredths = $\qquad$ .
5. The library, post office, and gas station are all on Elm Street. The library is three miles west of the post office. The gas station is six miles east of the post office. How far apart are the library and gas station? $\qquad$
6. Complete the pattern. A12, B16, C20, $\qquad$ , $\qquad$ .
7. What is the area of a rectangle with a length of 9 feet and a width of 7 feet? $\qquad$

For Problems 8-9, use the bar graph to the right.
8.

On what day of the week did Ron bowl the best? $\qquad$
9. On which two days of the week did Ron have the same score?

Ron's Bowling Scores

$11+43=$
10.
$26+19=$
$18+17=$

1. Which of these shapes does not belong?
a. $\square$
b. $\square$
c.

d.

2. Which letter on the shape is beside an acute angle? $\qquad$

3. Which of the following is (are) equal to $\frac{1}{4}$ ?
a. $\frac{5}{20}$
b. $\frac{7}{21}$
c. $\frac{10}{40}$
d. $\frac{12}{50}$
4. Write as a decimal: Forty-three thousandths = $\qquad$
5. If $a=10$ and $b=6$, then $a+b=16$. Circle: True or False.
6. Draw the next shape in the sequence. $\square$

7. 

What is the perimeter of the shape to the right? $\qquad$


For Problems 8-9, use the chart to the right.
8. Which student had the best grade?
$\qquad$
9. Desiree's score was about twice as high as the score for $\qquad$ .

$3 \longdiv { 6 3 6 } =$
$3 \longdiv { 1 2 9 } =$
$3 \longdiv { 5 0 1 } =$


1. Justine's bill at a restaurant is $\$ 14.58$. She pays with a twenty dollar bill. How much change should she get back? $\qquad$
For Problems 2-3, use the diagram to the right.
2. Which letter is inside the square and pentagon?

3. Which letter is outside the pentagon but inside the triangle? $\qquad$
4. Write the fraction for the shaded part in each figure below.
A.

B.

5. If 7 out of 11 balloons are red, what fraction of balloons are NOT red? $\qquad$
6. Complete the pattern. 1, 2, 4, 7, 11, $\qquad$ .

For Problems 7-8, use the bar graph to the right.
7. During which month(s) did more than 200 customers visit the store?
8. In August, half as many customers visited the store as in $\qquad$ .

9. | 3.6 | 4.9 | 12.75 |
| ---: | ---: | ---: |
| -0.7 | -0.6 | -0.35 |

$$
\times 4
$$

$$
\times 5
$$

$$
\times 6
$$



1. Round each number to the nearest ten.
$24=$
$311=$
$107=$
2. Which of the following shapes has a right angle?
a.

b.

c.

d.

3. Which of the following groups of numbers is in order from least to greatest?
a. $323,411,421,506$
b. 108, 106, 217, 304
c. $98,94,36,29$
d. $200,199,198,405$
4. Which of the following is NOT equal to 45 ?
a. $3 \times 10 \times 2$
b. $3 \times 3 \times 5$
c. $10+10+10+10+5$
d. $50-5$
5. $12 \times \square=48$
6. Complete the pattern. $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}$, $\qquad$ .
7. Which shape has a greater area? $\qquad$


For Problems 8-9, use the chart to the right.
8. Which car weighs the most? $\qquad$
9. How much more does the red car weigh than the green car? $\qquad$

| Weights of cars |  |
| :---: | :---: |
| Color | Weight in pounds |
| Blue | 2,786 |
| Red | 3,196 |
| Green | 2,500 |

10. 1.2
1.4
2.6
$\times 0.6$
$\begin{array}{r}1.7 \\ \times 0.7 \\ \hline\end{array}$
$\begin{array}{r}\times 0.8 \\ \hline\end{array}$

11. Which of the following numbers is NOT equal to 36 ?
a. $4 \times 9$
b. $18+18$
c. $40-6$
d. $10+10+10+6$
12. Which one of these shapes has four vertices (corners)?
a.

b.

c.

d.

13. Which of the following groups of numbers is in order from greatest to least?
a. $323,411,421,506$
b. $108,106,217,304$
c. $98,94,36,29$
d. $200,199,198,405$
14. Complete the chart.

| Add $\mathbf{0 . 4}$ |  |
| :---: | :---: |
| Start | End |
| 2.2 | 2.6 |
| 3.1 |  |
| 4.7 |  |

5. $28 \div \square=7$
6. Complete the pattern: $\frac{1}{3}, \frac{2}{5}, \frac{3}{7}$, $\qquad$ .
. Which shape has the greater perimeter?


For Problems 8-9, use the bar graph to the right.
8. How many eggs did Lucky lay last season?
$\qquad$
9. How many more eggs did Clucky lay than Lucky? $\qquad$

## 10. 3.3

$$
4.5
$$

$$
+2.4
$$

7.2
$+10.3$

Eggs Laid Last Season


Each $\square=25$ eggs

1. Circle the number with a 4 in the thousands place. $\begin{array}{lllll}324 & 421 & 4,321 & 49\end{array}$
2. Which of these shapes is a hexagon?
a. $\square$
b.

c. $\square$
d.

3. Which of the following is NOT equal to 40?
a. $4 \times 8+8$
b. $2 \times 2 \times 5$
c. $10+(5)(6)$
4. Put the fractions in order from least to greatest $\frac{3}{8}, \frac{7}{8}, \frac{2}{8}, \frac{8}{8}$. $\qquad$ .
5. If $\frac{42}{x}=7$, then $x=$ $\qquad$ .
G. Complete the pattern: $12,15,17,20,22,25$, $\qquad$ .
6. How many cubes would three layers of this shape have? $\qquad$

7. According to the graph to the right:
$\qquad$
8. $9 \cdot 7=$
$8 \cdot 8=$
$6 \cdot 7=$
9. $3+5+7=$

$$
4+7+6=
$$

$$
2+9+8=
$$



1. About how many commercials might have been shown this year during the Super Bowl?
a. 4
b. 40
c. 400
2. Which letter on the shape is beside an obtuse angle? $\qquad$

3. Which of the following groups of numbers is in order from least to greatest?
a. $0.312,0.411,0.601,0.806$
b. $10.8,10.6,31.7,40.4$
c. $0.88,0.84,0.76,0.49$
d. $5.00,3.19,1.98,0.755$
4. If $\frac{1}{4}=\frac{x}{8}$, then $x=$ $\qquad$ .
5. Anna finished a race five yards ahead of Jack. Jack finished nine yards ahead of Tina. How many yards ahead of Tina was Anna? $\qquad$
6. Forty tickets were sold for a lottery. If Lon bought two tickets, what are the chances he will win? $\qquad$
7. What is the perimeter of the triangle?

8. 

How many glasses of lemonade did Rhonda sell? $\qquad$
9.
2.6
$+3.2$
10.
5.6
$\times 10$
6.3
$\times 10$
$\times$

Glasses of Lemonade Sold

| Justin | - | - | - | - |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Leah | - | - |  |  |  |
| Rhonda | - | - | - |  |  |
| Candice | - |  |  |  |  |

Each $\because=10$ glasses.


1. Round each number to the nearest hundred.

$$
124=\quad 2,311=\quad 48=
$$

For Problems 2-3, use the diagram to the right.
2. What letter is inside the triangle and the rectangle that is not in the square? $\qquad$

3. Which letter is inside of all three shapes? $\qquad$
4. Circle the fraction that is NOT in its simplest form.
$\frac{1}{4}$
$\frac{2}{5}$
$\frac{3}{8}$
$\frac{2}{6}$

For Problems 5-6, use the chart to the right.
5. According to the chart, what fraction of the total number of students in Room 1 are boys? $\qquad$
6. How many boys are in Rooms 1 and 2? $\qquad$

| 4th Grade Classes |  |  |
| :---: | :---: | :---: |
|  | Boys | Girls |
| Room 1 | 12 | 13 |
| Room 2 | 15 | 11 |

7. $3 \cdot 4+2 \cdot 2=16$ Circle: True or False
8. A car salesman says he will give out a prize one day of next week to anyone who test drives a car. What is the probability that he will give out this prize on Thursday? $\qquad$
9. $\frac{1}{2} \times \frac{1}{3}=$
$\frac{1}{3} \times \frac{1}{4}=$
$\frac{1}{5} \times \frac{1}{6}=$
10. 46

79
$-16$
$-16$
$-16$


1. In the number 1,846 , the $\qquad$ is in the tens place and the $\qquad$ is in the hundreds place.
2. Which of these shapes best represents a cube?
a.

b.

c.

d.

3. Circle the fraction that is NOT in its simplest form.
$\frac{5}{11}$
$\frac{5}{15}$
$\frac{5}{12}$
$\frac{5}{18}$
4. If $\frac{2}{3}=\frac{a}{15}$, then $a=$ $\qquad$ .
5. $\square+11=20$
6. These four cubes were placed in a bag. What is the probability that the dark one would be pulled out of the bag first? $\qquad$


For Problems 7-8, use the bar graph to the right.
7. Which of the following statements is (are) true about the graph?
a. $\mathrm{A}+\mathrm{B}=50$
b. $C$ is half of $B$
c. B is more than A
8. $A+B+C$ is closest to:
$\begin{array}{ll}\text { a. } 50 & \text { b. } 100\end{array}$
c. 200

Q. Change to decimal form.

$$
2 \frac{1}{2}=\quad 3 \frac{1}{4}=\quad 20 \frac{1}{2}=
$$

10. $\frac{20}{4}=$
$\frac{30}{5}=$
$\frac{40}{8}=$

11. What is the value in cents of 2 quarters, 3 dimes, and 4 nickels? $\qquad$
12. Circle the set of lines that are perpendicular:

$\qquad$
13. Which set of shapes shows two figures that are congruent? $\qquad$
a.

b.

c.


For Problems 4-5, write > , <, or $=$.

5. $\frac{1}{5} \bigcirc \frac{2}{10}$
6. Complete the pattern: $5,7,4,6,3,5$, $\qquad$ .
7. What is the perimeter of a square if each side is 5 feet? $\qquad$
8. The $y$ numbers in this chart are $\qquad$ times the $x$ numbers.
g. 150

275
$-125$
325
$-75$

10

$$
5 \longdiv { 1 5 5 } =
$$

| $x$ | $y$ |
| :---: | :---: |
| 2 | 10 |
| 3 | 15 |
| 7 | 35 |

$$
4 \longdiv { 4 0 8 } =
$$



1. I have a 1 in the ones place, a 4 in the tens place, and a 5 in the hundreds place. What number am I? $\qquad$

2. Which set of figures shows two shapes that are similar but not congruent (same size and shape)?
a.

b.

c.

3. Which fraction is in the simplest form?
a. $\frac{5}{10}$
b. $\frac{7}{14}$
c. $\frac{10}{25}$
d. $\frac{12}{25}$
4. $3+5+\square=12$
5. Complete the pattern. $3,5,9,11,15,17$, $\qquad$ .
6. What is the area of a rectangle that is 15 feet long and 3 feet wide? $\qquad$

For Problems 8-9, use the bar graph to the right.
8. According to the chart, which class has the same amount of boys and girls in it? $\qquad$
9. About how many more girls than boys does

Class 1 have? $\qquad$

Students in 5th Grade Classes


$$
\begin{array}{rrr}
3.8 & 14.06 & 10.0 \\
-2.6 & -1.01 & -6.5 \\
\hline
\end{array}
$$



1. Eileen's bill for her lunch was $\$ 7.33$. She gave the waiter $\$ 10$ and told him to keep the change as a tip. How much of a tip did the waiter get? $\qquad$
2. Which of these shapes best represents a cylinder? $\qquad$
a.

b.

c.


For Problems 3-4, write > , <, or =. Use the bars to help you.

5. $3 \cdot 2+6 \div 2=$
6. Which shape has a greater perimeter?

B
2



For Problems 8-9, use the chart to the right.
8. Which student gets the largest allowance each week? $\qquad$
9. Which student gets $\$ 15$ each week? $\qquad$

| Allowances per Week |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sandy | $\$$ |  |  |  |  |
| Jared | $\$$ | $\$$ | $\$$ | $\$$ |  |
| Jackie | $\$$ | $\$$ | $\$$ |  |  |

\$ sign = \$5
10.

| 300 | 250 | 450 |
| ---: | ---: | ---: |
| -50 | -125 | -200 |



1. Which of these has more days?
a. 1 month
b. 3 weeks
c. 20 days
2. All of these shapes have a right angle except:
a. $\square$
b. $\square$
c.

d.

3. Put these numbers in order from greatest to least: 5.06, 5.60, 0.056, 0.56.
$\qquad$
4. Circle all fractions that are equal to $\frac{1}{3}$ : $\quad \frac{2}{6} \quad \frac{2}{5} \quad \frac{3}{9} \quad \frac{3}{8}$
5. If the pattern continues, should the last box have a dot in it? Circle: Yes or No

6. Which shape has a greater area? $\qquad$

7. These five cubes were placed in a bag. What is the probability that a dark one would be pulled out of
 the bag first? $\qquad$
8. $\square \div 4=13$
9. $12+6+8=$
$11+9+5=$
$7+9+13=$
10. $15-4-6=$
$21-10-2=$
$20-6-3=$

11. Cross out the three-dimensional shape.

12. If $\frac{1}{2} \times \frac{3}{5}=\frac{3}{10}$, then $\frac{1}{3} \times \frac{4}{5}=$ $\qquad$ .

For Problems 4-5, use the circle graph to the right.
4. How much of the circle does region C represent?

6. Find the number that completes the problem.

$$
2 \square \times 7=168
$$

7. If $a=4$, then $10 a=$ $\qquad$ -.
8. If you rearrange the numbers of the year 2007, what is the largest number you can make? $\qquad$
9. $(9)(7)=$
(25)(6)=
(3)(12) $=$
10. $\frac{49}{7}=$

$$
\frac{56}{8}=
$$

$$
\frac{27}{9}=
$$



1. Which of these has more minutes?
a. 2 hours
b. 200 minutes
2. If you fit these two shapes together, which shape will you have? $\qquad$

a.

b.

3. $\frac{2}{5} \times \frac{3}{7}=$

For Problems 4-6, use the Venn diagram to the right.
4. How many people like chocolate only? $\qquad$
5. How many people like caramel only? $\qquad$

7. If $3 x=21$, then $x=$ $\qquad$ .
8. Complete the pattern. A C E G.
9. 14.3
15.8
23.4
$-6.8$
$-4.6$
$-0.5$
10. $2 \cdot 3 \cdot 5=$
$2 \cdot 2 \cdot 3=$
$2 \cdot 5 \cdot 7=$


1. A state lottery might give out ten $\qquad$ dollars as a top prize.
a. million
b. billion
c. trillion
2. Which of the following shapes has only two right angles?
a.

b.

c.

3. $\frac{1}{2}$ of $40=$
4. $\frac{1}{3} \times \frac{1}{8}=$
5. $\frac{5+3+4}{6}=$
6. Describe the rule for this pattern: $2,7,6,11,10,15 \ldots$ $\qquad$
7. Find the area of the hexagon. $\qquad$

8. 6,000
9. $2 \cdot 3 \cdot \square=30$
$-5,386$
10. 

4,508
$-1,207$


1. If it is 5:12 now, what time was it 24 minutes ago? $\qquad$
2. Which of the following letters has one line of symmetry? $\quad \mathbf{E} \quad \mathbf{F} \quad \mathbf{N}$
$\qquad$
3. $\frac{1}{3}$ of $9=$
4. $\frac{1}{5} \cdot \frac{4}{7}=$
5. $4(5+11)=$
6. The third number in each of these rows is found by $\qquad$ .

| 1 | 1 | 2 |
| ---: | ---: | ---: |
| 2 | 3 | 5 |
| 5 | 10 | 15 |
| 10 | 10 | 20 |

7. Find the perimeter of the shape to the right. $\qquad$

8. Find the sum of the second (shaded) column. $\qquad$

| 1 | 2 | 9 |
| :--- | :--- | :--- |
| 5 | 8 | 6 |
| 4 | 3 | 7 |

9. $16 \div 4=$
$18 \div 3=$
$15 \div 5=$
10. 34

56
$\times 3$


1. Round each number to the nearest 1,000 .

$$
1,238=
$$

$\qquad$ $1,850=$ $\qquad$ $3,320=$ $\qquad$
2. Which of the following letters has two lines of symmetry? $\quad \mathbf{H} \quad \mathbf{W} \quad \mathbf{L} \quad \mathbf{V}$
$\qquad$
3. $\frac{1}{4}$ of $12=$
4. If $\frac{1}{5}+\frac{1}{5}=\frac{a}{5}$, then $a=$ $\qquad$ .
5. $3+4 \cdot 2+6=$
6. Complete the pattern box.

| 2 | 5 | 8 | 12 |
| :---: | :---: | :---: | :---: |
| 10 | 25 |  |  |

7. If the perimeter of this shape is 25 , then $x=$ $\qquad$ .

8. The sum of the third (shaded) column is $\qquad$ .

| 1 | 2 | 9 |
| :--- | :--- | :--- |
| 5 | 8 | 6 |
| 4 | 3 | 7 |

9. $9 \times 6=$
$9 \cdot 8=$
(9)(9) =
10. $\square \div 4=9$

$$
\square \div 6=8
$$

$$
\square \div 5=7
$$



1. What is the value in cents of 10 quarters and 2 dimes? $\qquad$
2. Which of the following represents a line?
a.

b.

c.

3. Which fraction represents $15 \div 2$ ?
a. $\frac{2}{15}$
b. $\frac{15}{2}$
c. $\frac{15}{15}$
d. $\frac{2}{2}$
4. $\frac{2}{7}+\frac{3}{7}=$
5. $4+7+\square=32$
6. Fill in the empty square to the right by following the pattern given.

| 3 | 8 |  | 6 |
| :---: | :---: | :---: | :---: |
| 9 | 24 | 30 | 18 |

7. The width of a rectangle is 4 feet. If the area is $36 \mathrm{ft}^{2}$, then the length $=$ $\qquad$ .
8. Find the sum of the first column. $\qquad$

| 1 | 2 | 9 |
| :--- | :--- | :--- |
| 5 | 8 | 6 |
| 4 | 3 | 7 |

$\begin{array}{r} \\ \times 50 \\ \hline\end{array}$
60
$\times 60$


1. Kelly has $\$ 10$, which is $\$ 2$ more than Tina has. How much money does Tina have?
$\qquad$
2. Which of the following represents a ray?
a.

b.

c.

3. Which of the following represents the division problem $16 \div 9$ as a fraction?
a. $\frac{9}{16}$
b. $\frac{16}{16}$
c. $\frac{16}{9}$
d. $\frac{6}{19}$
4. $\frac{5}{7}+\frac{6}{7}=$
5. Use,,$+- \times$, or $\div$ to complete. $\square$
6. How many sides should the next shape in the pattern have? $\qquad$

7. If every side of an octagon is 6 inches, what is the perimeter? $\qquad$
8. What is the product of the first (shaded) row? $\qquad$

| 1 | 2 | 9 |
| :--- | :--- | :--- |
| 5 | 8 | 6 |
| 4 | 3 | 7 |

9. Find the remainders for $3 \longdiv { 1 4 }$ and $5 \longdiv { 1 7 }$. $\qquad$
10. $\frac{1}{2}$ of $12=$

$$
\frac{1}{2} \text { of } 18=
$$



1. Bobby is 7 years old. Ray is twice Bobby's age. How old is Ray? $\qquad$
2. Which of the following represents a line segment?
a.

b.

c.

3. All of the following mean 21 divided by 9 except:
a. $\frac{21}{9}$
b. $\frac{9}{21}$
c. $21 \div 9$
d. $9 \longdiv { 2 1 }$
4. If $4 \frac{1}{2}=\frac{9}{2}$, then $6 \frac{1}{2}=$ $\qquad$ -
5. $5 \times(8+2)=$
6. Complete the pattern: A B A A B A A A B A A A $\qquad$ .
7. Find the area of the triangle.

8. Find the product of the numbers in the third row. $\qquad$

| 1 | 3 | 9 |
| :--- | :--- | :--- |
| 5 | 8 | 6 |
| 4 | 2 | 7 |

9. 

$7 \longdiv { 4 2 0 } =$
3) $\longdiv { 1 , 5 0 0 } =$
10. 8,359

6,728
+


1. Describe how you could have $\$ 0.87$ with the least number of coins possible.
2. Which circle has a radius drawn on it?
a.

b.

c.

3. $\frac{8}{12}+\frac{3}{12}=$
4. If $5 \frac{1}{3}=\frac{x}{3}$, then $x=$ $\qquad$ .
5. $(5 \times 6)+(3 \times \square)=36$
6. Complete the pattern. 64, 32, 16, 8 , $\qquad$ .
7. What is the area of the shape to the right? $\qquad$

8. How many eggs did Lucky lay? $\qquad$

| Eggs Laid Last Season |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Lucky |  |  |  |  |
| Clucky |  |  |  |  |
| Old Red |  |  |  |  |
| Lilly |  |  |  |  |

10. 2,761
$\begin{array}{r}\text { + 3,478 } \\ \hline\end{array}$

11. Sarah has three dozen cookies. How many cookies is this? $\qquad$
12. The hypotenuse is the longest side of a right triangle. Which letter is beside the hypotenuse in this triangle? $\qquad$

13. $3 \frac{1}{3}+2 \frac{1}{3}=$
14. If $\frac{n}{6}=\frac{1}{2}$, then $n=$ $\qquad$ -
15. Use + or $\times$ to complete the problem. $\frac{1}{5} \square \frac{2}{5}=\frac{3}{5}$.
16. Which of the following triangles would be the next in this pattern?
a.

b.

c.

17. 

Find the product of the third column. $\qquad$

| 9 | 3 | 1 |
| :--- | :--- | :--- |
| 5 | 8 | 6 |
| 4 | 2 | 7 |

For Problems 8-9, use the bar graph to the right.
8. According to the graph, how many students are getting an A for their math grade? $\qquad$
9. According to the graph, are there more Bs or Ds in the class? $\qquad$

Math Grades

10. $6 \times 0.2=$
$7 \times 0.4=$
$8 \times 0.5=$


1. If today is Monday, what day will it be eight days from now? $\qquad$
2. Which letter is beside the hypotenuse? $\qquad$
d

3. Write as an improper fraction: $8 \frac{1}{3}=$
4. Use >, <, or = to complete the problem.

$$
0.55 \square \frac{1}{2}
$$

5. Use + or $\times$ to complete the problem.

$$
\frac{1}{5} \square \frac{2}{5}=\frac{2}{25}
$$

6. Complete the sequence: Z 1 Y 2 X 3 $\qquad$ .
7. Find the area of the shape. $\qquad$

8. Shade the second column of the grid used in Problem 7.

อ. $1.3+0.2+0.4=$
$0.8+0.2+0.7=$
10. $\begin{aligned} & (2)(4)(5)= \\ & (4)(5)(1)= \\ & (5)(6)(0)=\end{aligned}$


1. If tomorrow is the th of June, what day will it be three days from today?
$\qquad$
2. The following three numbers are the side lengths of a right triangle: 5, 12, and 13. Which number is the length of the hypotenuse? $\qquad$
3. $\frac{4}{9} \cdot \frac{1}{3}=$

For Problems 4-5, use the grid to the right.
4. The grid has 100 boxes.

How many of them are shaded? $\qquad$
5. How many boxes in the grid are not shaded? $\qquad$

|  |  |  |  |  | $\|l\|$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

6. $4(3+9)=$
7. What is the perimeter of the shape to the right? $\qquad$


| $x$ | 8 | 10 | 16 |
| :---: | :---: | :---: | :---: |
| $y$ | 4 | 5 |  |

9. Use $>,<$, or $=$ to complete the problem. $0.75 \square \frac{3}{4}$
10. $\frac{1}{5} \cdot \frac{1}{4}=$
$\frac{1}{7} \cdot \frac{2}{3}=$
$\frac{1}{10} \cdot \frac{3}{4}=$

11. If today is Tuesday, what day will it be three weeks from tomorrow? $\qquad$
12. Which circle has a diameter drawn on it?
a.

b.

c.


For Problems 3-4, use the grid to the right.
3. How many boxes in the grid are shaded? $\qquad$

4. What fraction of the grid is shaded? $\qquad$

$\boldsymbol{\sigma}, 2 \cdot 2 \cdot 2 \cdot \square=40$
7. Complete the sequence: $0,5,1,6,2,7$, $\qquad$ , $\qquad$ .
8. The following cubes are placed into a bag. What is the probability that a cube with the letter B
 will be drawn from the bag? $\qquad$
9. $3.65 \times 100=$
10.
$4 \longdiv { 1 , 2 3 6 } =$
$5 \longdiv { 1 , 2 3 5 } =$


1. Ted gets paid every two weeks. Is it possible for Ted to get three paychecks in one month? Circle: Yes or No
2. Which circle has a chord drawn on it that is not a diameter?
a.

b.

c.

3. $\frac{8}{5}-\frac{3}{5}-\frac{2}{5}=$

For Problems 4-5, use the grid to the right.
4. What percent of the grid is shaded? $\qquad$

5. What percent of the grid is not shaded? $\qquad$
6. Which would have the greater area, the circle or the box? $\qquad$


For Problems 7-9, use the chart to the right.
7. $a+b=$
8. $b \cdot d=$
9. $\frac{e}{b}=$

| Letter | Value |
| :---: | :---: |
| $a$ | 2 |
| $b$ | 4 |
| $c$ | 0 |
| $d$ | 5 |
| $e$ | 8 |

10. $\frac{1}{5}+\frac{2}{5}=$
$\frac{1}{5} \cdot \frac{2}{5}=$


For Problems 1-3, circle the amount that is larger.

$$
\begin{array}{llll}
\text { 1. } 2 \text { months } & \text { or } & 10 \text { weeks } \\
\text { 2. } 9 \text { quarters } & \text { or } & 2 \text { dollars } \\
\text { 3. } 4 \text { feet } & \text { or } & 50 \text { inches }
\end{array}
$$

For Problems 4-5, use the diagram to the right.
4. Triangle 1 is $\qquad$ of the square.
a. $\frac{1}{2}$
b. $\frac{1}{3}$
c. $\frac{1}{4}$

5. Triangle 2 is $\qquad$ of the square.
a. $\frac{1}{2}$
b. $\frac{1}{3}$
c. $\frac{1}{4}$
6. Sally says the perimeter of the rectangle is 22 . Desiree says that it is 18 . Who is correct? $\qquad$

7. Which shape has the greater area-the triangle or the square? $\qquad$


For Problems 8-10, use the chart to the right.
8. $d-a=$
9. $\frac{c+8}{5}=$
10. If the pattern continues, what would be the

| Letter | Value |
| :---: | :---: |
| $a$ | 24 |
| $b$ | 28 |
| $c$ | 32 |
| $d$ | 36 |
| $e$ |  | value of the letter $e$ ? $\qquad$



1. The number 1 with three zeros after it would represent $\qquad$ .
a. one thousand
b. ten thousand
c. one million
2. Match the name of each word with its figure.
rhombus
a.

square
b.
 quadrilateral
c. $\square$

For Problems 3-4, use the grid to the right.
3. What percent of the grid is shaded? $\qquad$
4. If $50 \%$ of the grid is supposed to be shaded, how many more boxes would need to be shaded? $\qquad$

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

5. $16 \div 2 \div 2 \div 2=$

$$
5,394,600
$$

6. Fill in the box with the next number in the sequence: $5,494,600$

7. An electric fence around a property would be most like the $\qquad$ of the property.
a. area
b. volume
c. perimeter
8. $4 \cdot 5=\square+5$
9. $2.36 \times 10=$
$0.34 \times 100=$ $46 \times 10=$
10. $\frac{1}{2}$ of $40=\quad \frac{1}{2}$ of $50=$

11. The number 435 should be written as:
a. four hundred and thirty five
b. four hundred thirty five
c. four hundred thirty-five
12. Which set of shapes shows two figures that are NOT congruent (same size and shape)?
a.

b.


c.

d.


For Problems 3-5, circle the larger amount.
3. $\frac{1}{4}$ or $75 \%$
4. $25 \%$ or $\frac{1}{2}$
5. $\frac{9}{10}$ or $95 \%$
6. The following cards were numbered as shown, placed face down on a table, and then mixed up. If a card is turned over randomly, what number would show up
 most often? $\qquad$
7. $4 \times 9=$ $\square$ $\times 6$
8. Which of the following graphs shows these ages the best? $\operatorname{Bob}=12, \operatorname{Tim}=11$, Vern $=6$.
a.

b.

C. $15 \frac{c}{c}$ Ages
$21 \times 2=$
$30 \times 2=$

$$
\frac{1}{3}+\frac{1}{3}=
$$

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

9. $14 \times 2=$
10. $\frac{1}{3} \times \frac{1}{3}=$

11. About how wide is this paper?
a. 9 centimeters
b. 9 inches
c. 9 feet
12. How many lines of symmetry does this shape have? $\qquad$

13. $\frac{1}{8}+\frac{3}{8}+\frac{3}{8}=$
14. What fraction does the letter B represent? $\qquad$


For Problems 5-7, cross out the number that does NOT belong on the list with the others.
5. $2 \quad 8 \quad 10 \quad 13$
6. $\begin{array}{lllll}7 & 4 & 11 & 19\end{array}$
7. $6 \quad 15 \quad 25 \quad 35$
8. The four cards below form a pattern. What would the 7th card look like?

| 1 | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: |
| 5 | 10 | 15 | 20 |


9. $\square$

$$
\frac{+14}{22}
$$

10. Complete the table by finding the sum and product of the two numbers in each row.

| Number | Number | Sum | Product |
| :---: | :---: | :---: | :---: |
| 5 | 8 |  |  |
| 7 | 9 |  |  |



1. Each song on Mel’s MP3 player is most likely to be about $\qquad$ long.
a. 3 minutes
b. 3 seconds
c. 30 minutes
d. 3 hours
2. Match each word with its figure.
Line
a. $\bullet \longrightarrow$
Segment
b. $\longleftrightarrow$
Ray
c.

3. What fraction does the letter A represent? $\qquad$

4. Which number should go in the box? 340, 344, $\square$ , 352
a. 345
b. 346
c. 352
d. 348
5. $200,000+50,000+8,000+100+4=$ $\qquad$
a. 205,841
b. 258,140
c. 258,104
d. 250,814
6. I am an odd number between 10 and 20 . I can be divided by 3 . What number am I? $\qquad$
7. As Martha wrapped a present in wrapping paper, she happened to think that the paper was most like the $\qquad$ of the box.
a. surface area
b. perimeter
c. volume

For Problems 8-9, use the graph to the right.
8. According to the graph, sales in March were $\qquad$ .
a. up
b. down
c. about the same as the other months
9. In which month were the sales the best? $\qquad$



1. Which of the following might be reasonable dimensions of a bathroom?
a. 40 in. $\times 30$ in.
b. 2 miles $\times 3$ miles
c. 9 feet $\times 12$ feet
2. Which set of shapes show two figures that are congruent?
a.

b.
$\square$
c.

d.


3. What fraction should be next in this sequence? $\frac{1}{12}, \frac{3}{12}, \frac{5}{12}$, $\qquad$ -
4. $\frac{1}{2} \times \frac{3}{4} \times \frac{5}{6}=$

For Problems 5-6, use the grid to the right.
5. What percent of the grid is shaded? $\qquad$
6. How many more squares would have to be filled
 in so that half of the grid is shaded? $\qquad$
7. I am an even number between 1 and 10. I can be divided by 3 evenly. What number am I? $\qquad$
8. Justine says that the area of the rectangle is 24 square units. Marcie says that it is 20 square units. Who is correct?

9. $7 \cdot 7=$
$8 \times 8=$
(6)(6) $=$
10.
$7 \div 0.7=$
$8 \div 0.8=$
$6 \div 0.6=$


1. $400,000+5,000+800+6=$
a. 450,860
b. 450,806
c. 405,860
d. 405,806
2. How many sides does each shape have?

Pentagon: $\qquad$ Octagon: $\qquad$ Decagon: $\qquad$
3. If $45 \%=0.45$, then $55 \%=$ $\qquad$ .
4. Sales tax in a particular state might be:
a. $6 \%$
b. $60 \%$
5. What number is twice as much as 2,400 ?
a. 4,800
b. 1,200
c. 4,400
d. 480
6. What is the error in the problem $32 \times 9=281$ ? $\qquad$
7. Sally believes that the perimeter of this rectangle is 32 .

What mistake did she make? $\qquad$


For Problems 8-10, use the chart to the right.
8. $a+b=$
9. $b \times c=$
10. $\frac{(a)(c)}{2}=$

| $\boldsymbol{a}$ | $\boldsymbol{b}$ | $\boldsymbol{c}$ |
| :--- | :--- | :--- |
| 5 | 4 | 6 |



1. The number 1 with six zeros after it would represent $\qquad$ .
a. one thousand
b. ten thousand
c. one million
2. First do the addition; then reduce the fraction: $\frac{3+9+2}{8+10+2}=$
3. Write as a decimal: $61 \%=$
4. Write as a percent: $0.47=$
5. If you add 5 to the product of 4 and 6 , you get $\qquad$ .
6. Complete the pattern by filling in the bottom box.
7. $3+2 \times \square=17$


For Problems 8-10, round to the underlined place value.
8. 33.28 $\qquad$
g. 0.0561 $\qquad$
10.
347.5 $\qquad$


1. If you rearrange the numbers in the year 1942, what is the smallest number you can make? $\qquad$

For Problems 2-3, use the diagram to the right.
2. Which letter is outside the rectangle but inside the square? $\qquad$

3. Which letter is inside all three shapes? $\qquad$

| Fraction | Decimal | Percent |
| :---: | :---: | :---: |
| $\frac{3}{4}$ |  |  |
|  | 0.1 |  |

For Problems 5-6, use the Venn diagram to the right.
5. How many people prefer scary movies only (not funny)? $\qquad$
Favorite Kinds of Movies

6. How many people took part in this survey? $\qquad$
7. The $y$ numbers in this chart are $\qquad$ times the $x$ numbers.

| $x$ | 3 | 8 | 12 |
| :---: | :---: | :---: | :---: |
| $y$ | 12 | 32 | 48 |

For Problems 8-10, estimate to find the best answer.
8. $22+51$ is approximately
a. 70
b. 80
c. 60
d. 100
9. $96+103$ is approximately
a. 100
b. 300
c. 200
d. 400
10. $21 \times 29$ is approximately
a. 500
b. 400
c. 300
d. 600


1. The number 1 with four zeros after it would represent $\qquad$ .
a. one thousand
b. ten thousand
c. one million

For Problems 2-3, use the diagram to the right.
2. What fraction of the large triangle is shaded? $\qquad$

3. If one more triangle were shaded, what percent of the large triangle would be shaded? $\qquad$
4. Complete the chart.

| Fraction | Decimal | Percent |
| :---: | :---: | :---: |
|  |  | $25 \%$ |
|  | 0.3 |  |

5. One more than the product of 8 and 10 is $\qquad$ .
6. Which of the following is NOT a multiple of 6? $\qquad$ $\begin{array}{lllll}6 & 12 & 24 & 32 & 36\end{array}$
7. Which of the following would be the correct order for simplifying a math problem?
a. exponents, parentheses, multiplying, adding
b. multiplying, dividing, subtracting, parentheses
c. parentheses, adding, multiplying, exponents
d. parentheses, exponents, multiplying, adding
8. Complete the pattern: $1,3,6,8,11,13,16$, $\qquad$ .
9. $\frac{1}{8}+\frac{3}{8}=\quad \frac{1}{8} \times \frac{3}{8}=$

10. The correct way to write 12.36 would be:
a. Twelve and thirty-six hundredths
b. Twelve and thirty-six thousandths
c. Twelve and thirty six tenths
d. Twelve and thirty and six hundredths
11. Put these three angles in order from least to greatest: Right, Obtuse, Acute.
12. Which two letters represent the hypotenuse of a triangle in this figure?
a. AD
b. $A B$
c. BC
d. AC


For Problems 4-6, cross out the item that does NOT belong in each list.
4.4
5. fence
walls
frame
carpet
6. days
inches weeks
months
7. If $7 \times 6=5 \times 8+x$, then $x=$ $\qquad$ .

For Problems 8-10, use the chart to the right.
8. $a b=$
$a c=$
9. $\frac{c}{a}=$
$\frac{c}{b}=$

| $\boldsymbol{a}$ | $\boldsymbol{b}$ | $\boldsymbol{c}$ |
| :---: | :---: | :---: |
| 3 | 5 | 30 |

10. $a+b+c=$

11. The 1984 Olympics were in Los Angeles. If the Olympics occur every four years, which of these years did not have an Olympics?
a. 1988
b. 1996
c. 2002
d. 2004
12. Each side of the cube is called a face. How many faces does a cube have? $\qquad$

13. If $3 . \overline{8}$ means $3.88888888 \ldots$, then how would you write $1.77777777 \ldots$ ? $\qquad$
14. $20 \%+30 \%=$
15. If $\frac{1}{2} \times 10=8-x$, then $x=$ $\qquad$ .

For Problems 6-8, estimate to find the best answer. (Hint: " $\approx$ " means "approximately")
6. $26+73+41 \approx$
a. 120
b. 140
c. 160
7. $\$ 1.78+\$ 2.99+\$ 0.84 \approx$
a. \$6
b. \$3
c. \$4
8. $8+11+12+17 \approx$
a. 30
b. 40
c. 50
9. $\frac{7}{9}-\frac{4}{9}=$
$\frac{7}{9}+\frac{4}{9}=$
10. Change to improper form: $9 \frac{1}{2}=$
$10 \frac{1}{4}=$


1. How many 50-cent cans of soda can be purchased with $\$ 5$ ? $\qquad$
2. How many faces does this shape have? $\qquad$
3. What is another way to write $0.8222222222 \ldots$ ? $\qquad$
4. Rewrite in decimal form: $\frac{25}{100}=$
5. If $12+m=22$, then $m=$ $\qquad$ .
6. Complete the pattern. A B B C C C $\qquad$ .

For Problems 7-8, use the chart to the right.
7. Which grade had about the same number of honor roll students both years? $\qquad$
8. Which grade should be most concerned about the trend from 2006 to 2007? $\qquad$

| Honor Roll Students |  |  |
| :---: | :---: | :---: |
| Grade | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ |
| 3 | 51 | 83 |
| 4 | 46 | 47 |
| 5 | 90 | 46 |

9. 

$$
\begin{array}{rr}
0.952 & 0.855 \\
-0.841 & -0.704 \\
\hline
\end{array}
$$

10. $\frac{100}{10}=$

$$
\frac{1,000}{10}=\quad \frac{10,000}{10}=
$$



1. Using the numbers $1-6$, fill in the blanks to create the largest number possible:
$\qquad$ .
2. If the dotted line is a line of symmetry, how long is side $A B$ ? $\qquad$

3. Write using bar notation: $0.39393939 \ldots=$
4. If $\frac{x}{100}=0.3$, then $x=$ $\qquad$ .
5. $10 \%+25 \%+20 \%=$

For Problems 6-7, use the chart to the right.
6. Complete the chart.
7. If $y=35$, then $x=$ $\qquad$ .

| $x$ | $y$ |
| :---: | :---: |
| 2 | 10 |
| 3 | 15 |
| 5 |  |

8. Use the graph to find the values of $\mathrm{A}, \mathrm{B}$, and C .
A = $\qquad$ $B=$ $\qquad$
$\mathrm{C}=$ $\qquad$
9. $\frac{1}{10}+\frac{1}{10}=$
$\frac{1}{10} \cdot \frac{1}{10}=$
10. 

$(0.5)(0.6)=$
$(0.4)(0.7)=$



1. Using the numbers 1-6, fill in the blanks to create the smallest number possible:
$\qquad$
$\qquad$
2. Fill in the missing number in the factor tree.

3. Is 34.82 closer to 34 or 35 ? $\qquad$
4. Eight hundredths plus nine hundredths equals $\qquad$ .
5. $\frac{1}{2}+0.2=$
6. $20.4 \%+20.5 \%+4.1 \%=$

For Problems 7-8, use the circle graph to the right.

Election Survey

a. more than
b. less than
c. the same as
9. $0.98 \times 10=$

$$
0.98 \times 100=
$$

$$
0.98 \times 1,000=
$$

10. $\frac{5}{100}=$ $\qquad$ \%

$$
\frac{15}{100}=
$$

$\qquad$ \%
$\frac{85}{100}=$ $\qquad$


1. Mike can ride his bike 15 miles per hour. How many miles could he reasonably ride in one day?
a. 350
b. 250
c. 500
d. 100
2. Would five smaller boxes fit inside the larger box? Circle: Yes or No

3. $0.4+0.3+0.2=$
4. Circle the greater value: $0 . \overline{7}$ or 0.7
5. $\frac{3}{4}+0.20+0.05=$

For Problems 6-8, round to the place value of the underlined number.
G. 0.615 $\qquad$
7. 93 $\qquad$
8. 105.87 $\qquad$
9. Find the areas of the rectangles described in the chart.
$\qquad$

| rectangle | length | width | area |
| :---: | :---: | :---: | :---: |
| 1 | 6 | 7 |  |
| 2 | 9 | 10 |  |
| 3 | 5 | 9 |  |

10. Circle the problems below that have whole number answers (not decimal or fractional answers).

$$
24 \div 5 \quad \frac{200}{10} \quad 0.16 \times 100 \quad \frac{1}{4}+\frac{1}{4}+\frac{1}{4}
$$



1. It took Jill two hours to drive 100 miles. What was her average speed? $\qquad$
2. Would 10 smaller cans fit inside the larger can?

Circle: Yes or No
3. Circle the greater value: $0 . \overline{7}$ or $\frac{3}{4}$

4. Complete the chart.

| Fraction | Decimal | Percent |
| :---: | :---: | :---: |
|  |  | $40 \%$ |
| $\frac{1}{4}$ |  |  |

5. If $x=y$ and $y=2$, then $3 x=$ $\qquad$ .
6. Complete the chart.
(Hint: The product of each column equals the same value.)

| 1 | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: |
| 24 | 12 | 8 |  |

7. James has $\$ 2.85$. Fill in the remaining box to show how many nickels he has.

| Quarters | Dimes | Nickels |
| :---: | :---: | :---: |
| 8 | 7 |  |

8. Complete the pattern. AC BD CE DF $\qquad$ .
9. Circle the following fractions that are equal to $\frac{1}{5}$. $\quad \frac{2}{10} \quad \frac{4}{20} \quad \frac{5}{20} \quad \frac{10}{40}$
10. How many days are in each of the following?

2 weeks = $\qquad$
1 year (not a leap year) = $\qquad$
3 days more than 5 weeks $=$ $\qquad$


1. A case holds four boxes. A box holds five cartons. How many cartons are in two cases? $\qquad$
2. How many faces does this shape have? $\qquad$

For Problems 3-5, use < , >, or = to complete.
3. 8.13 $\qquad$ 8.4
4. 0.004 $\qquad$ 0.05
5. $0 . \overline{4}$ $\qquad$ 0.4
6. Complete the factor tree.

7. Can the numbers you wrote in the empty boxes in Problem 6 be divided by other numbers besides 1 and the numbers themselves? Circle: Yes or No
8. How much money was raised by all the children?

9. $3+\square=18 \quad 3 \times \square=18 \quad 18 \div \square=3$
10. 40 dimes = $\qquad$ dollars
40 nickels = $\qquad$ dollars
40 quarters $=$ $\qquad$ dollars


1. Joanne has 15 basketball cards. Jackie has 8. If Joanne gives Jackie 5 of her cards, how many will each girl have? Joanne: $\qquad$ Jackie: $\qquad$
2. What is the total number of degrees in a triangle? $\qquad$

3. Write using bar notation: $0.38888888 . . .=$
4. If $\sqrt{9}=3$, then $\sqrt{16}=$ $\qquad$ .
5. Becky is the same height as Brittany. Brittany is the same height as Mandy. Are Becky and Mandy the same height? Circle: Yes or No
6. If $3 x+2=11$, could $x=5$ ? Circle: Yes or No

For Problems 7-8, use the graph to the right.
7. Which company (A, B, or C) made the poorest investment in one year? $\qquad$
Investment in millions of dollars per year

9. How many sides does each of these shapes have?

Rectangle: $\qquad$ Pentagon: $\qquad$ Octagon: $\qquad$
10. Change to an improper fraction: $5 \frac{1}{3}=$ $6 \frac{2}{3}=$

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



1. Which of the following numbers is one billion?
a. $1,000,000$
b. $1,000,000,000$
c. $1,000,000,000,000$
2. What is the missing angle? $\qquad$

3. $0.3+40 \%+\frac{1}{4}=$
4. $\sqrt{25}=$
5. The letters A, B, and C can be arranged in six ways. Five ways are listed below. Find the sixth way.
ABC
ACB
BAC
BCA
CAB

For Problems 6-8, solve if $a=10, b=5$, and $c=3$.
6. $12.4 \times a=$
7. $\frac{a+b}{c}=$
8. $a+b \cdot c=$
9. In Problem 8, which operation should you do first?
a. add
b. subtract
c. multiply
d. divide
10. What is the area of this rectangle?

What is the perimeter of this rectangle? $\qquad$



1. Jason drove for three hours at an average speed of 55 miles per hour.

How far did he go? $\qquad$
2. The interior angles of a triangle add up to $\qquad$ degrees.
3. Circle all of the following that are equal to $\frac{3}{10}$ :
$0.3 \quad 3 \% \quad \frac{6}{10}$ $\square$
4. $\sqrt{4(4)(1)}=$
5. Fill in the missing number.

6. Two times a number is 14 . What is the number? $\qquad$
7. If the pattern continues, should the last box be shaded or clear? $\qquad$

8. Allan has $\$ 3.05$. Fill in the remaining box to show how many dimes he has.
9. 67

92
$-28$
$-45$
$-33$
$(3)(4)(3)=$
(2)(5)(3) =


1. Michaela makes $\$ 5.50$ per hour at her job. How much does she make in an average eight-hour day? $\qquad$

2 What is the area of the shape? $\qquad$

3. $\frac{1}{2}(3 \cdot 4+4)=$
4. $\sqrt{36} \cdot \sqrt{81}=$
5. If a coin were tossed on the grid in Problem 2, would it have a better chance of landing inside or outside of the shape? $\qquad$

6 Five more than five times a number is 30 . What is the number? $\qquad$
7. Place ( ) symbols in this problem to make a true statement. $3+9 \times 4=48$
8. Point B is two units larger than point A. What number represents the value of point B ? $\qquad$

9. Draw the next B in the pattern.

## B $\boldsymbol{\infty}$ G

## Sum

Find the sum of each row.

| 3 | 5 | 7 |
| :--- | :--- | :--- |
| 6 | 8 | 1 |
| 9 | 4 | 2 |



1. 5,649 rounded to the nearest: $10=$ $\qquad$ $1,000=$ $\qquad$
2. If both the length and width of this rectangle are doubled, what will the new area be? $\qquad$
3. Circle the two smallest numbers.

$\begin{array}{llllll}3.68 & 3.06 & 3.7 & 3.08 & 36.8 & 3.068\end{array}$
4. If $7^{2}=7 \times 7=49$, then $8^{2}=$ $\qquad$ .

For Problems 5-6, use the spinners to the right.
5. How many possibilities could occur if both spinners are spun? $\qquad$

6. What is the probability of getting an A and then a 2 ? $\qquad$
7. Fill in the missing prime numbers between 2 and 30 .

| 2 | 3 |  | 7 | 11 | 13 |  | 19 | 23 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

For Problems 8-10 use $>$, < , or $=$.
8. $\sqrt{100}-\frac{20}{2}$
9. 2.8 $\qquad$ $2 . \overline{7}$
10. $\frac{2}{3}-\frac{1}{2}$

For Problems 1-2, use the calendar to the right.


MAY

1. Sixteen days after May 4 would be a:
a. Monday
b. Tuesday
c. Wednesday
d. Thursday
2. Which Tuesday has a date that is a prime number? $\qquad$

| $\mathbf{S}$ | $\mathbf{M}$ |  |  |  |  | $\mathbf{T}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{W}$ | $\mathbf{T}$ | $\mathbf{F}$ | $\mathbf{S}$ |  |  |  |
|  |  |  |  | 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 |

3. Match the letters to the numbers using the number line.

$\qquad$
4. Cross out any prime numbers from the grid.

| 5 | 8 | 12 | 15 | 21 | 23 |
| :--- | :--- | :--- | :--- | :--- | :--- |

5. What is the probability that a student pulled at random from Class 1 is a boy? $\qquad$

|  | Boys | Girls | Total |
| :---: | :---: | :---: | :---: |
| Class 1 | 10 | 15 | 25 |
| Class 2 | 18 | 12 | 30 |

6. What would the next shape in this pattern be? $\square \rightsquigarrow \bigcirc \bigcirc$ ऊ $\square \square$ ऊ
a. $\square$ b. $\bigcirc$
c. そ

For Problems 7-10, match each description with its correct mathematical expression.
7. Twice a number.
a. $\frac{n}{2}$
8. A number to the second power.
b. $\sqrt{n}$
9. A number divided by 2.
c. $2 n$
10.

The square root of a number.
d. $n^{2}$


1. Monique weighs 84 pounds. When she is holding her baby brother, she weighs 96 pounds. How much does Monique's baby brother weigh? $\qquad$
2. Complete the factor tree.

3. What is the common denominator for $\frac{1}{3}+\frac{1}{2}$ ? $\qquad$
4. $\frac{1}{2}(3+5)^{2}=$
5. What is the probability that a student pulled at random from Class 1 is a girl? $\qquad$

|  | Boys | Girls | Total |
| :--- | :---: | :---: | :---: |
| Class 1 | 10 | 15 | 25 |
| Class 2 | 18 | 12 | 30 |

6. Which one of the following solves this problem? $2 x+3=15$
a. $x=5$
b. $x=4$
c. $x=7$
d. $x=6$
7. Complete the analogy:
 is to $\square$ is to:
a.

b.

c. $\square$
8. Find two pairs of different (unequal) odd numbers that complete the equation.
$\square$
9. Fill in the missing numbers to complete the chart.

| Numbers | Sum | Difference | Product |
| :---: | :---: | :---: | :---: |
| 1,4 | 5 |  | 4 |
| 2,8 | 10 | 6 |  |

10. If $x^{2}=16$, then $x=$ $\qquad$ .

11. A new car is available in five different colors and with two different types of engines. How many different combinations of colors and engines could you order? $\qquad$
12. The perimeter of the rectangle to the right is 24 ft . What is the width? $\qquad$

13. What would the area in Problem 2 be? $\qquad$ (Hint: Use the width you found.)
14. $(3+7)^{2}=$
15. What is the total number of boys in these classes? $\qquad$

| Quarters | Boys | Girls | Total |
| :---: | :---: | :---: | :---: |
| Class 1 | 10 | 15 | 25 |
| Class 2 | 18 | 12 | 30 |

For Problems 6-7, use the Venn diagram to the right.
6. Fill in the Venn diagram using the following information.

Four people only drive cars.
Six people only drive trucks.
Eight people drive both cars and trucks.


Trucks
8. Fill in the missing numbers. $3 \times 4=\square \div 6=\square$
9. 5,122
$+2,308$
10. $\frac{1}{5}+\frac{3}{5}=$ $\frac{1}{5} \cdot \frac{3}{5}=$


For Problems 1-2, use the calendar to the right.

1. Three weeks later than Friday, May 2, would be Friday, May $\qquad$ .
2. Sandy gets paid every Friday. How many paychecks will she get in the month of May? $\qquad$
MAY

| $\mathbf{S}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{y}$ | $\mathbf{M}$ | $\mathbf{T}$ | $\mathbf{W}$ | $\mathbf{T}$ | $\mathbf{F}$ | $\mathbf{S}$ |
|  |  |  |  | 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 |

3. If each box is two units long, find the perimeter of the shaded rectangle. $\qquad$ .

4. $\sqrt{3(4+8)}=$
5. Find the next card in the pattern.

| 2 |
| :--- |
| 5 |


| 4 |
| :--- |
| 8 |


| 6 |
| ---: |
| 11 |


| 8 |
| :---: |
| 14 |

5th Card $=\square$
6. Which of these numbers should go inside the box to make the equation true?
$\frac{\square+4}{2}=10$
a. 12
b. 20
c. 16
7. If $10 \%$ of this grid were shaded, how many squares would be shaded? $\qquad$ .


For Problems 8-10, evaluate if $a=2, b=4$, and $c=12$.
8. The sum of $a$ and $c=$
9. $6^{a}=$
10. $\frac{c}{3 b}=$


1. What is the best estimate of the time on this clock?
a. $3: 55$
b. $4: 55$
c. $2: 55$
d. 3:15

2. Fill in the square with the correct fraction.
$12 \times \square=6$
3. Which shape is congruent to this one?
a.

b.

c.

4. $3^{2}+2^{2}=$
5. What is the total number of girls in these classes? $\qquad$

|  | Boys | Girls | Total |
| :--- | :---: | :---: | :---: |
| Class 1 | 10 | 15 | 25 |
| Class 2 | 18 | 12 | 30 |

6. If each of these hearts could be colored red, pink, or blue, how many different ways could they be colored? (Hint: More than one heart could be the same color.)
$\qquad$


For Problems 7-10, match each expression with its correct description.
7. $\frac{n}{3}$
a. A number to the third power.
8. $3 n$
b. Three times a number.
9. $n^{3}$
c. The sum of a number and three.
10. $n+3$
d. A number divided by three.


1. Round each number to the underlined position.
$1 \underline{2} 8=$
3,158 =
48 . $37=$
2. How many cubes are in this shape? $\qquad$

3. The numbers in the $y$ column are $\qquad$ times bigger than those in the $x$ column.

| $x$ | $y$ |
| :---: | :---: |
| 0.2 | 0.8 |
| 0.3 | 1.2 |
| 0.5 | 2 |
| 0.7 | 2.8 |

4. What number solves this equation? $\square$ $\times(3+8)=55$
5. Fifty tickets were sold for the lottery. Jackson bought five tickets. What are the chances he will win? $\qquad$
6 Fill in the box with the next number in the sequence:
2,384

$$
2,884
$$

2. $2(\sqrt{25} \times \sqrt{25})=$ $\square$

For Problems 8-9, use the bar graph to the right.
8. According to the graph, how many desks were in row A? $\qquad$
9. Which two rows had the same number of desks?
$\qquad$ and $\qquad$

10. What is the remainder after each number is divided?
$9 \longdiv { 7 6 }$
$6 \longdiv { 5 9 }$ $\qquad$ $4 \longdiv { 8 9 }$ $\qquad$


1. A good runner might be able to run $\qquad$ miles in one hour.
a. 20
b. 30
c. 10
2. Which of these shapes is a rhombus?
a.

b.

c.

3. Use + or $\times$ to complete the problem. $\frac{1}{6} \square \frac{4}{6}=\frac{5}{6}$.
4. $2 \cdot 2 \cdot 2 \cdot 3^{2}=36$

Circle: True or False
5. If you add 12 to the quotient of 15 divided by 3 , you get $\qquad$ .
6. The cards to the right were placed facedown on a table and then mixed up. Which letter would be most likely to appear when a card is flipped over? $\qquad$
7. Write as an improper fraction: $8 \frac{3}{4}=$

| G | R | Q | A |
| :---: | :---: | :---: | :---: |
| G | C | G | S |
| G | T | B | G |
| N | G | L | L |
| P | N | Q | G |

8. Write in mixed fraction form: $\frac{9}{5}=$
9. $0.327 \times 100=$

$$
0.327 \times 10=
$$

$0.327 \times 0.1=$
10. $10 \%$ of $46=$ $\qquad$ $10 \%$ of $140=$ $\qquad$

1. Which numbers can both 6 and 12 be evenly divided by? Circle: $2 \begin{array}{lllllllll} & 3 & 4 & 6 & 8 & 12\end{array}$
2. $\square$ is at $(2,3)$, then is at $\qquad$ .
3. If $2^{3}=2 \cdot 2 \cdot 2=8$, then $3^{3}=$ $\qquad$ .

4. Below are some perfect square root numbers. What would the next perfect square root be? $\begin{array}{llll}\sqrt{4} & \sqrt{9} & \sqrt{16} & \sqrt{25}\end{array}$ $\qquad$
5. If $3 x+5=20$, which of these numbers could $x$ equal?
a. 10
b. 15
c. 5
d. 20
6. The square root of what number is 9 ? $\qquad$
7. What is the perimeter of the shape to the right? $\qquad$


For Problems 8-9, use the frequency chart to the right.
8. On which day of the week did Doug mow the most lawns? $\qquad$

| Lawns Doug Mowed |  |
| :---: | :---: |
| Mowing Day | Tally |
| M | $\\|\\|\\|$ |
| T | $\\|\\|$ |
| W | $\\|\\|$ |
| TH | $\\|\\|$ |
| F | $\\|$ |
| S | $\\|\\|\\|$ |
| SUN |  |

For Problem 10, use the rules of negatives to help you simplify each expression.
Doug mowed the same number of lawns. ,
9. On $\qquad$ and $\qquad$

| Negative $\times$ Positive $=$ Negative |
| :--- |
| Negative $\times$ Negative $=$ Positive |
| Negative + Negative $=$ Negative |
| Negative $\div$ Negative $=$ Positive |
| Negative $\div$ Positive $=$ Negative |



1. Which activity is more likely to occur?
a. getting a hole in one
b. bowling a 300 game

| Activity | Odds |
| :---: | :---: |
| hole in one (golf) | 33,000 to 1 |
| bowling a 300 game | 11,500 to 1 |

2. What are the coordinates of the $\square$ ? $\qquad$

3. $5 \frac{1}{3}+6 \frac{1}{3}=$
4. Fill in the missing factors of 24 .

| 1 | 2 | 3 |  | 6 | 8 |  | 24 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

5. Complete the pattern. 1, 3, 7, 15, $\qquad$
6. $3 \times(\square+4)=18$
7. Which one of the following is NOT equal to the others?
30\%
0.3
$\frac{3}{10}$
0.03
8. $10^{3}=$
9. $(-9) \div(-3)=$
$(-15) \div(3)=$
$(30) \div(-10)=$

For Problem 10, use the rules of negatives to help you simplify each expression.

$$
(-8)(-8)=
$$

$$
(9)(-5)=
$$

$$
(-7)(9)=
$$

Negative $\times$ Positive $=$ Negative Negative $\times$ Negative $=$ Positive Negative + Negative $=$ Negative Negative $\div$ Negative $=$ Positive Negative $\div$ Positive $=$ Negative


1. Match each word with its definition:
Prime
a. numbers that evenly divide another number
Factors
b. whole numbers that are the products of other numbers
Multiples
c. a number that can only be divided by 1 and itself

For Problems 2-3, use the graph to the right.
2. What is the distance from one shaded box to the other? $\qquad$
3. To get from the gray box to the black box, you
 would move $\qquad$ —.
a. north
b. south
c. east
d. west
4. $10-(6+2)=$
5. If $\frac{4}{9}=\frac{x}{36}$, then $x=$ $\qquad$ .
6. If $3+6+2+8+3+n=27$, then $n=$ $\qquad$ .

For Problems 7-9, circle the greatest amount.

| 2. | $5^{3}$ | $\sqrt{25}$ | $10^{2}$ |
| :--- | :--- | :---: | :---: |
| 8. | 3 weeks | 20 days | 1 month |
| 9. | $(-5)(-5)$ | $4 \cdot 6$ | $\frac{100}{5}$ |

For Problem 10, use the rules of negatives to help you simplify each expression.
10.
$(-8)+(-5)=$
$4-(-5)=$

Negative + Negative $=$ Negative Positive - Negative $=$ Positive


1. Match each kind of fraction with the correct example.
Improper $\qquad$ a. $\frac{5}{4}, \frac{4}{5}$
Mixed $\qquad$ b. $4 \frac{1}{2}$
Reciprocal $\qquad$ c. $\frac{9}{5}$
2. What is the perimeter of the shape? $\qquad$

3. $6 \frac{1}{4}-5 \frac{3}{4}=$
4. If $|-6|=6$, then $|-100|=$ $\qquad$ .
5. Which numbers can both 8 and 24 be evenly divided by?

$$
\text { Circle: } 1 \begin{array}{lllllll} 
& 2 & 3 & 4 & 6 & 8 & 12
\end{array}
$$

6. Complete the sequence: $\frac{1}{8}, \frac{1}{4}, \frac{3}{8}, \frac{1}{2}$, $\qquad$ .

For Problems 7-10, match each mathematical expression with its correct description.

| 7. | $a+b$ | a. $b$ is subtracted from $a$ |
| :--- | :--- | :--- |
| 8. | $a-b$ | b. $b$ is added to $a$ |
| 9. | $a b$ | c. $b$ is multiplied by $a$ |
| O. $\frac{a}{b}$ | d. $a$ is divided by $b$ |  |



1. What is the best estimate of how much of this rectangle is shaded?
a. $\frac{1}{2}$
b. $\frac{1}{3}$
c. $\frac{1}{10}$

2. Which of the triangles below is equilateral?
a.

b.

c.

3. $2 \frac{2}{7}=\frac{16}{7}$

Circle: True or False
4. If $\frac{3}{5}=\frac{x}{40}$, then $x=$ $\qquad$ -
5. $48=2 \cdot 2 \cdot 2 \cdot 2 \cdot$ $\square$
6. Write as a mixed fraction: $3.75=$
7. All of the following equal 10 except:
$\frac{10^{3}}{10^{2}} \quad \sqrt{100} \quad 5^{2}$
8. Put these numbers in order from least to greatest: $-5,7,-2,8,0$.
9. $(-3)+(-8)=$
$(-3)+(8)=$
$(-3)-(8)=$
10. $(-12)(-4)=$
$(-12)(4)=\quad \frac{-12}{4}=$


1. What is the best estimate of the part of the rectangle that is shaded?
a. $\frac{1}{2}$
b. $\frac{1}{8}$
c. $\frac{1}{3}$
d. $\frac{1}{4}$
$\pm$
2. Which of the triangles below is isosceles?
a.

b.

c.

3. $0 . \overline{3}=$ $\qquad$
a. $\frac{1}{2}$
b. $\frac{1}{8}$
c. $\frac{1}{3}$
d. $\frac{1}{4}$
4. $\sqrt{5^{2}-3^{2}}=$
5. $-12 \div 2=$
$-12 \div 2 \times(-3)=$
6. $\frac{1}{4} \times \square=5$
7. Complete the empty boxes.

| 4 |
| :---: |
| 6 |
| 6 |
| 8 |
| 16 |
| 30 |$\times \frac{1}{2}$| 2 |
| :---: | | 2 |
| :---: |

For Problems 8-10, evaluate if $a=6, b=-2$, and $c=-4$.
8. $a+b+c=$
9. $a b c=$
10. $a+\frac{b}{c}=$
a.

b.

c. ${ }_{4}$

3. Put the following numbers into the correct box below: $3,14,2,4,21,6,8,28$

| Multiples of 7 |
| :---: |
|  |
|  |


| Factors of 24 |
| :--- |
|  |

For Problems 4-6, circle True or False
4. $(20 \div 2) \cdot 3=30$
5. $2(5+4)-6=5$
6. $4+7 \times 3=25$
7. Put the numbers $\{-6,10,0,-5,4\}$ in order from least to greatest. $\qquad$
8. Complete the missing numbers in the table.

| Sum | Product | Numbers |
| :---: | :---: | :---: |
| 10 | 16 | 2 and 8 |
| 8 | 12 | and |

9. $-6+8+4-3=$

$$
6-8+4-3=
$$

10. 

$$
426
$$

$- 3 \longdiv { 5 1 3 } =$

2. If point B is halfway between points $A$ and $C$, what number does it represent? $\qquad$

3. $(3+0.3+0.7)^{2}=$
4. If $4.38=4+\frac{a}{10}+\frac{8}{b}$, then $a=$ $\qquad$ and $b=$ $\qquad$ .
5. If you spin the spinner to the right, what are the chances it will land on 1 or 3 ? $\qquad$


For Problems 6-9, solve each equation for $a$.
6. If $a+8=12$, then $a=$ $\qquad$ .
7. If $a-2=-12$, then $a=$ $\qquad$ .
8. If $-6 a=-48$, then $a=$ $\qquad$ .
9. If $\frac{a}{(-3)}=10$, then $a=$ $\qquad$ .
10. $\frac{1}{4} \times \frac{2}{4}=$

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



1. A ton is 2,000 pounds. It might take about $\qquad$ sixth graders to weigh a ton.
a. 25
b. 100
c. 1,000
2. Match each triangle with its correct definition.
Equilateral
a. a triangle with two equal sides
Scalene
b. a triangle with three equal sides
Isosceles
c. a triangle with no equal sides
3. If Brandon can hop three squares at a time, how many hops will it take him to get to the end of the walkway? $\qquad$

4. Put the following numbers into the correct box below: $3,10,2,20,6,25$

| Multiples of 5 |
| :---: |
|  |


| Factors of 18 |
| :---: |
|  |

5. If this pattern continues, what letter would be at the top of the next shape in the pattern? $\qquad$
$\overbrace{c} \overbrace{B}^{A}$


6. Which of these is the same as $7^{5}$ ?
a. $7+7+7+7+7$
b. $5+5+5+5+5+5+5$
c. $5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5$
d. $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$
7. Which of these is the same as $0.5888888 \ldots$ ?
a. $0 . \overline{58}$
b. $\sqrt{0.58}$
c. $0.5 \overline{8}$
d. |0.58|
$\frac{6}{30}=$
$(8)(-4)=$
$(-5)-(-7)=$
8. Reduce: $\frac{5}{15}=$
$\frac{10}{24}=$
9. $(-8)(-7)=$
$(-8)(5)=$
10. $-5+(-7)=$
$(-5)-7=$
11. Marty got a score of 45 with two throws on this dart board. Which two categories did he hit? $\qquad$

| 30 | 15 |
| :--- | :--- |
| 20 | 10 |

2. Find the area of one of the triangles.
$\qquad$
10
3. Complete the chart.

| Fraction | Decimal | Percent |
| :---: | :---: | :---: |
|  |  | $5 \%$ |

4. These letters are put on cards and then one card is drawn at random. What is the probability that a Y is drawn? $\qquad$
$\begin{array}{lllllllll}T & T & Y & Y & Y & R & S & S\end{array}$
5. Which of these numbers would solve both of these equations? $2 x+7=13$ and $6 x-5=13$
a. 3
b. 10
c. 2
6. All of the following equal 5 except: $|-5| \quad \sqrt{25} \quad \frac{5^{4}}{5^{3}} \quad 5^{2}$
7. If $\frac{5}{8} \times a=1$, then $a=$ $\qquad$ .
8. $\frac{2 \cdot 3 \cdot 3 \cdot 5 \cdot 7}{3 \cdot 5 \cdot 7}=$
(Hint: Cross out the common factors in the top and the bottom.)
Q. Change to an improper fraction: $4 \frac{1}{5}=\quad 5 \frac{3}{5}=\quad 1 \frac{9}{10}=$
9. $\left(\frac{1}{3}\right)\left(\frac{2}{3}\right)=\quad-\left(\frac{2}{5}\right)\left(\frac{4}{7}\right)=$


For Problems 3-4, use the game board to the right.
3. A coin is tossed on the game board. Would it land on a Red or a Blue square more often? $\qquad$
4. What is the probability the coin would land on Red?

| Red | Red | Blue | Blue |
| :---: | :---: | :---: | :--- |
| Blue | Red | Blue | Blue |
| Blue | Red | Red | Blue |
| Blue | Red | Red | Blue |

$\qquad$
5. Fill in the missing factors of 28 .

| 1 | 2 |  | 7 |  | 28 |
| :--- | :--- | :--- | :--- | :--- | :--- |

6. $\frac{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}{4 \cdot 3 \cdot 2 \cdot 1}=$
7. If $\frac{7}{2} \times q=1$, then $q=$ $\qquad$ .
8. One of the black squares has the coordinates of $(4,5)$. What coordinates does the other square have? $\qquad$

Q. If point B is halfway between points A and C, what number does it represent? $\qquad$

9. Circle the problems below that have a whole number answer.

$$
400 \div 5 \quad \frac{300}{10} \quad|-16| \quad \frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}
$$


3. What is the common denominator for $\frac{1}{4}+\frac{1}{5}$ ? $\qquad$

For Problems 4-7, match each clue with its correct answer.
4. the square root of 9
a. 20
5. a 9 squared
b. 3
6. a factor of 10
c. 5
7. a multiple of 10
d. 81

For Problems 8-10, evaluate if $a=-5, b=-4$, and $c=-3$.
8. $a+b+c=$
9. $a b c=$
10. $a-c=$


1. How many legs do each of the following have?

4 chairs have $\qquad$ legs
5 ducks have $\qquad$ legs
2. What is the volume of this box? $\qquad$

3. $50 \%+10 \%+0.05=$
4. $20 \%$ of 30 is $\qquad$ .

For Problems 5-7, solve for $x$.
5. If $x-25=96$, then $x=$ $\qquad$ .
6. If $1.5 x=6$, then $x=$ $\qquad$ .
7. If $\frac{3}{8} x=1$, then $x=$ $\qquad$ .

For Problems 8-9, use the coordinate graph to the right.
8. What are the coordinates of G? $\qquad$
9. What are the coordinates of K ? $\qquad$

10. $\frac{-15}{-3}=$
$(-5)(3)=$
$\frac{40}{-5}=$
$(-6)(-3)=$


1. 1 ton -300 pounds = $\qquad$ pounds.
2. Find the area of the right triangle. $\qquad$

3. Complete the chart.

| Fraction | Decimal | Percent |
| :---: | :---: | :---: |
| $\frac{3}{2}$ |  |  |

4. Tina wants dark-colored tile for her floor. Which tile has more black squares? $\qquad$


Tile A


Tile B
5. $\frac{9 \cdot 5 \cdot 7 \cdot 3 \cdot 6 \cdot 0}{4 \cdot 3 \cdot 2 \cdot 1}=$
6. $-3(4+5)+2=$
7. To get the $y$ number, you add $\qquad$ to the $x$ number.

| $x$ | $y$ |
| :---: | :---: |
| -1 | 1 |
| -3 | -1 |
| -5 | -3 |

For Problems 8-10, use the coordinate graph to the right.
8. What are the coordinates of A? $\qquad$
9. What is the distance from A to B? $\qquad$
10. To get from B to A, you would travel:
a. east
b. west
c. north
d. south



1. Cross out the three-dimensional shape.
$\square$
$\square$

2. How many lines of symmetry does this shape have? $\qquad$

3. If $a-13=-8$, then $a=$ $\qquad$ .
4. Complete the sequence: $\frac{1}{2}, \frac{3}{5}, \frac{5}{8}, \frac{7}{11}$, $\qquad$ .
5. I am an even number between 30 and 40. If you add my digits together you get 7 . What number am I? $\qquad$

For Problems 6-8, cross out the number that does not belong in each list.
6. 3

11
7. 7

8
14
21
8. 131

272
494
126
9. $10 \%$ of $60=$
$20 \%$ of $60=$
$30 \%$ of $60=$
10. $138.6 \div 10=$
$13.86 \div 100=$
$0.1386 \div 10=$


1. A gallon of gas costs $\$ 2.93$ per gallon. Marcie's car holds 10 gallons. If her tank is empty, how much will it cost to fill it? $\qquad$
2. If $x>3$, which of these numbers could be a possible number for $x$ ?
a. 3
b. -22
c. 0
d. 4
3. $\frac{3}{4} \div \frac{1}{3}=$
4. All of the following are equal except: $1 \quad \frac{3}{3} \quad \frac{-3}{-3} \quad \frac{2}{4}$
5. Which of these fractions is not completely reduced? $\frac{2}{6} \quad \frac{2}{5} \quad \frac{3}{7}$

For Problems 6-8 use > , < , or $=$.
G. (6) ${ }^{2}$ $\qquad$ $(-6)^{2}$
7. -5 $\qquad$ |-5|
\&. $0.372 \times 1,000$ $\qquad$ $37.2 \times 100$
g. 3,281
$\begin{array}{r}\times 7 \\ \hline\end{array}$
10. $6 \longdiv { 1 1 , 8 0 2 } =$

1. If Hal usually mows 21 yards per week, how many yards does he average per day? $\qquad$
2. $\frac{3}{7} \div \frac{2}{3}=$
3. Which of these is the correct way to write the number 27.36?
a. Twenty-seven and thirty six tenths
b. Twenty seven and thirty six hundredths
c. Twenty-seven and thirty-six hundredths

For Problems 4-7, match each clue with its correct answer.
4. The positive square root of 9 .
a. 4
5. Nine squared.
b. 24
6. A factor of 8 .
c. 81
7. A multiple of 12 .
d. 3

For Problems 8-9, use the circle graph and table of information to the right.
8. The circle has been divided into 10 equal sections. According to the chart, how many sections would need to be shaded for category B? $\qquad$
9. How many sections would be shaded for category C?
10. Complete the chart:


| Category | Percent |
| :---: | :---: |
| A | $10 \%$ |
| B | $20 \%$ |
| C | $40 \%$ |
| D | $30 \%$ |


| Numbers | Sum | Product | Difference | Quotient |
| :---: | :---: | :---: | :---: | :---: |
| $-9,3$ |  |  |  |  |

1. If two darts were thrown at the board to the right, $\qquad$ could be a possible score.
a. 15
b. 26
c. 20

2. The dotted lines represent the lines of symmetry of this shape. What is the perimeter? $\qquad$ -

For Problems 3-6, match the correct value of $\boldsymbol{n}$.

3. $n+6=-1$
a. $n=5$
4. $-3 n=-15$
b. $n=-20$
5. $n^{2}=16$
c. $n=-7$
6. $\frac{n}{-5}=4$
d. $n=4$

For Problems 7-8, use the graph to the right.

Stock value per month in dollars

10. If $y=2 x+1$ and $x=4$, then $y=$ $\qquad$ .


1. Calvin reads an average of eight pages a night. About how many pages will he read in two weeks? $\qquad$
2. Match each number with its word:
thirty-eight and six hundredths
a. 38.6
thirty-eight and six tenths
b. 38.06
three and eight hundred six thousandths
c. 3.806
3. Match each statement with its correct answer.

The letter T has $\qquad$ .
a. two obtuse angles and an acute angle

The letter V has $\qquad$ . b. two right angles
The letter Y has $\qquad$ .
c. an acute angle

For Problems 4-7, circle True or False.
4. $10+32=16$

True or False
5. $2(5-10)+2=-8$
6. $\frac{4+3-9}{2}=1$

True or False
7. $-3+-4 \cdot 2=-11$

True or False
8. Put the following numbers into the correct box below: $3,8,15,10,2$

| Factors of 15 |
| :---: |
|  |


| Factors of 40 |
| :---: |
|  |

9. In Problem 8, could the number 5 be placed in either box? Circle: Yes or No
10. $\frac{1}{10}+\frac{6}{10}=$
$\frac{1}{10} \times \frac{6}{10}=$
$-\left(\frac{1}{10}\right) \times-\left(\frac{6}{10}\right)=$


For Problems 2-4, use the coordinate graph to answer True or False.
2
The point $(3,2)$ is inside the triangle and rectangle.
Circle: True or False
3. The point $(3,-4)$ is inside the circle.

Circle: True or False
4. The point $(-1,3)$ is outside of all three shapes. Circle: True or False

5. $\frac{9}{3}+(4 \cdot 2)=$

For Problems 6-8, use the table and bar graph to the right.
6. Use the graph to help you fill in the table with the number of students who received each grade.
7. According to the graph, there were three times as many $\qquad$ as $\qquad$ .
8. Were there any Fs in Miss Roth's class? $\qquad$

| Letter | Number |
| :---: | :---: |
| A |  |
| B |  |
| C |  |
| $D$ |  |



Find the area and perimeter of each square.


Area: $\qquad$
Perimeter: $\qquad$
$3 \cdot 2 \cdot 1=$
Area: $\qquad$
Perimeter: $\qquad$

2. How many faces does this shape have? $\qquad$

3. The top and bottom of the letter Z are $\qquad$ .
a. parallel
b. perpendicular
c. neither
4. List the factors of 12 . $\qquad$ , $\qquad$ , $\qquad$ $\longrightarrow$, $\qquad$ .
5. List the factors of 18 . $\qquad$ , $\qquad$ , $\qquad$ , $\qquad$ , $\qquad$ .
6. What is the greatest common factor (GCF) that Problems 4 and 5 have in common? $\qquad$
7. What should the next shape in the pattern be? $\qquad$

a. $\bigcirc$
b. $\bigcirc$
8. Ivan has soccer practice at 3:30 and a banquet at 6:00. If soccer practice lasts an hour, how much time will he have to get ready for the banquet? $\qquad$
9. Three boxes have the following dimensions. Find their volumes:

Box 1: 2, 4, $5 \quad$ Volume = $\qquad$ cubic units
Box 2: 3, 3, 4 Volume = $\qquad$ cubic units
Box 3: 2, 5, 8 Volume = $\qquad$ cubic units
10. Circle the prime number in each row.

| 5 | 8 | 10 |
| ---: | ---: | ---: |
| 4 | 12 | 23 |
| 21 | 18 | 29 |



1. If the first circle and then every other circle below were shaded, how many would be shaded? $\qquad$
$\bigcirc$

OO
 O ○

For Problems 2-5, use < , >, or = to complete.
2 3 $\qquad$ 3.5
3. radius $\qquad$ diameter
4. 52 $\qquad$ $\sqrt{36}$
5. 1 $\qquad$ $|-1|$
G. What is the next shape in the pattern? $\qquad$ $\square \square$ $\triangle$ ○ $\square$
a.

b.
c.
$\Lambda$
7. What is the greatest common factor (GCF) of 30 and 40 ? $\qquad$
8. Should the shaded square of the pattern have a dot in it? $\qquad$

9. Complete each statement with the correct number of angles.

A rectangle has $\qquad$ angles.
An octagon has $\qquad$ angles.
A hexagon has $\qquad$ angles.
10. Complete the chart.

| Numbers | Sum | Product | Difference | Quotient |
| :---: | :--- | :--- | :--- | :--- |
| $-20,-4$ |  |  |  |  |



1. 76 minutes = $\qquad$ hour(s) and $\qquad$ minutes.

For Problems 2-3, use the coordinate graph to the right.
2. In which quadrant would the point $(-3,5)$ be found? $\qquad$
3. In which quadrant would the point $(4,-6)$ be found? $\qquad$


For Problems 4-6, circle the greatest amount.
4. $12 \%$
0.15
$\frac{1}{5}$
5. $4-(-7)$
$20+(-5)$
$(-3)^{2}$
6. obtuse angle
acute angle
right angle
7. What is the greatest common factor (GCF) of 18 and 27 ? $\qquad$
8. Which of these four friends has a money amount that could be divided evenly by 3 ? $\qquad$

| Naomi | $\$ 42$ |
| :---: | :---: |
| Maria | $\$ 50$ |
| Barry | $\$ 58$ |
| Lisa | $\$ 65$ |

9. Add the three numbers, and then divide the answer by 3 to get the average.

2, 3, $7 \quad$ Average $=$ $\qquad$
5, 6, $10 \quad$ Average $=$ $\qquad$
2, 4, 9
Average $=$ $\qquad$
10. $1 . 2 \longdiv { 2 , 5 6 8 } =$


1. Jamie planned on splitting her package of candy evenly with her friend Ali. When she opened the package, she found that this was not possible. Which of the following could be the number of pieces of candy in her package?
a. 12
b. 21
c. 16
d. 20
2. Which of these could NOT be the angles of a triangle?
a. $100^{\circ}, 50^{\circ}, 30^{\circ}$
b. $100^{\circ}, 50^{\circ}, 40^{\circ}$
3. If 3:RED and 4:BLUE, then 6: $\qquad$ .
a. GREEN
b. BROWN
c. ORANGE
d. PINK
4. The number 0.2 would best belong between which two of these fractions? $\frac{1}{8} \quad \frac{1}{4} \quad \frac{3}{8} \quad \frac{1}{2}$
a. $\frac{1}{8}$ and $\frac{1}{4}$
b. $\frac{1}{4}$ and $\frac{3}{8}$
c. $\frac{3}{8}$ and $\frac{1}{2}$

For Problems 5-8, circle True or False.
5. $32 \cdot 4=32 \quad$ True or False
6. $4 \frac{2}{5}=\frac{22}{5} \quad$ True or False
7. $\frac{4}{20}=\frac{3}{19} \quad$ True or False
8. $5 \%=0.5 \quad$ True or False

For Problems 9-10, evaluate if $a=2, b=-6$, and $c=8$.
9. $c^{a}=$
10. $b(a+c)=$


1. Jason had $\$ 34$. He made $\$ 15$ mowing a lawn. Then he spent $\$ 12$ golfing. How much money does he have left? $\qquad$
2. Study the pattern below. If the pattern continued, what would the sum of the fourth square be? $\qquad$

| 1 | 2 |
| :--- | :--- |
| 3 | 4 |

First


Second

| 9 | 10 |
| :---: | :---: |
| 11 | 12 |

Third
3. Linda left for her friend's house at 1:45. Her father told her to be home in 1 hour and 15 minutes. By what time should she be home? $\qquad$
4. $\sqrt{\sqrt{16}}=$
5. The weather service predicts a $40 \%$ chance of rain for Friday. What is the predicted chance that it won't rain? $\qquad$

For Problems 6-9, match each description with its correct expression.
6. Twice a number plus one.
a. $n^{2}+1$
7. A number squared plus one.
b. $(n+1)^{2}$
8. The quantity of $n$ plus 1 squared.
c. $2(n+1)$
Q. Twice the quantity of $n$ and 1 .
d. $2 n+1$
10. $(0.59(6)=$
$(0.5)(-6)=$
$(0.6)(6)=$
$(-0.6)(-6)=$


1. Lynn caught six fish. All of them were between two and three pounds. What was the total weight of all six fish?
a. between 8 and 9 pounds
b. between 12 and 18 pounds
c. between 20 and 30 pounds
2. Which of these shapes has the greatest perimeter?
a.

b.

c.

d.

3. What is the total shaded area of all three boxes below as a mixed number? $\qquad$

4. If $3 n=-60$, then $n=$ $\qquad$ .
5. If $\frac{16}{n}=8$, then $n=$ $\qquad$ .

For Problems 6-7, use the coordinate graph to the right.
6. In which quadrant is the point $(-3,-4)$ ? $\qquad$

7. In which quadrant is the point $(-2,2)$ ? $\qquad$

For Problems 8-9, use the chart to the right.
8. Jennifer wants to open a bank account with $\$ 700$.

What interest rate will she get for her money? $\qquad$
9. What is the minimum amount of money that Tim will need to start a new account? $\qquad$
$\qquad$

| General Bank <br> Savings and Loan |  |
| :---: | :--- |
| Interest <br> Rate | Amount |
| $0 \%$ | $\$ 20-\$ 199$ |
| $1 \%$ | $\$ 200-\$ 499$ |
| $1.5 \%$ | $\$ 500-\$ 4,999$ |
| $2 \%$ | $\$ 5,000-\$ 9,999$ |
| $3 \%$ | More than $\$ 10,000$ |

For Problems 1-2, use the chart to the right.

1. Based on the chart, would 2,552 be a good number or a bad number? $\qquad$
2. Would 331 be a good number or a bad number? $\qquad$


| Good <br> Numbers |
| :---: |
| 1,331 |
| 252 |
| 13,531 |
| 22 |

For Problems 3-4, use the calendar to the right.
3. Which day would be two weeks and one day after the shaded one? $\qquad$
4. Tammy's birthday is on June 2. What day of the week will this be? $\qquad$

| MAY |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{S}$ | $\mathbf{M}$ |  | $\mathbf{~ W}$ | $\mathbf{T}$ | $\mathbf{F}$ | $\mathbf{S}$ |
|  |  |  |  | 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 |

5. $\frac{1}{2}(3 \cdot 2)=$
6. Below are five ways the letters HAT can be arranged. What is the sixth way? HAT HTA ATH AHT TAH
7. If $a=11$, then $a^{2}=$
8. If $a=-11$, then $a^{2}=$
Q. $(\text { negative })^{2}=$ positive Circle: True or False
9. Which of the shaded squares is incorrect on this subtraction problem? Circle: A B C

| 1 | 3 | 5 | 8 |
| :---: | :---: | :---: | :---: |
| - | 4 | 3 | 9 |
|  | A | B | C |
|  | 9 | 0 | 9 |



1. Randy is talking to his friend in Germany, who says the temperature there is $0^{\circ}$ Celsius. This would be closest to what temperature in the United States?
a. $100^{\circ} \mathrm{F}$
b. $-20^{\circ} \mathrm{F}$
c. $32^{\circ} \mathrm{F}$
2. Which two letters represent the hypotenuse of a triangle in this figure?
a. AD
b. AB
c. BC
d. BD


For Problems 3-4, use the grid to the right.
3. Jamie is supposed to shade $25 \%$ of the squares. How many more will she need to shade? $\qquad$
4. What fraction of the grid is currently shaded?

a. $\frac{1}{3}$
b. $\frac{1}{4}$
c. $\frac{1}{5}$
d. $\frac{1}{6}$
5. Which of these letters would look the same if was flipped upside down? $\qquad$

$$
\begin{array}{llll}
\mathrm{R} & \mathrm{~A} & \mathrm{~W} & \mathrm{X}
\end{array}
$$

6. If the number 35,673 was written backwards, would it be bigger or smaller? $\qquad$
7. What number is missing in this sequence? $\qquad$ $\begin{array}{lllll}15 & 12 & 6 & 3 & 0\end{array}$
8. If $7<a<11$, then $a$ could equal $\qquad$ .
a. 8
b. 6
c. 12
d. 15
9. Reduce: $\frac{5}{10}=$

$$
\frac{6}{18}=
$$

10. Circle the numbers below that are divisible by 2 .
438
537
246
711

11. Farmer Ed had 11 sheep. All but four of them ran away. How many are left? $\qquad$
12. This star has $\qquad$ .
a. all acute angles
b. some acute and some obtuse angles
c. all obtuse angles

13. What is the total area of all the shaded boxes below as a fraction? $\qquad$

14. $\left(3^{2}\right)^{2}=$
15. Fill in the missing factors of 32 .

| 1 |  | 4 |  |  | 32 |
| :--- | :--- | :--- | :--- | :--- | :--- |

6. How many numbers in the table to the right are prime? $\qquad$

| 3 | 4 | 17 |
| :---: | :---: | :---: |
| 7 | 6 | 12 |
| 8 | 11 | 9 |

7. If $-8<a<6$, then $a$ could equal $\qquad$ $\begin{array}{llll}\text {. } & -5 & 0 & 8\end{array}-10$
8. Circle the greatest amount. $\frac{1}{9} \quad \frac{1}{10} \quad 10 \% \quad 0.06$
9. Circle all of the following numbers that are evenly divisible by 5 .

$$
\begin{array}{lllll}
20 & 35 & 40 & 12 & 10
\end{array}
$$

10. Find the perimeter and area of the right triangle.
(Hint: The longest side is 10 cm .)
Perimeter $=$ $\qquad$
Area $=$ $\qquad$


11. Which of these numbers is evenly divisible by both 8 and 6?
a. 16
b. 48
c. 32
d. 12

For Problems 4-7, solve each equation for $\boldsymbol{n}$.
4. If $n+n+2=10$, then $n=$ $\qquad$ .
5. If $-6 n=-48$, then $n=$ $\qquad$ .
6. If $\frac{n}{12}=\frac{15}{36}$, then $n=$ $\qquad$ .
7. If $\sqrt{n}=9$, then $n=$ $\qquad$ .
8. What number is missing in this sequence? 2, -4 , $\qquad$ $,-16,32, \ldots$

For Problems 9-10, use the coordinate graph to the right.
9. To get from point A to point B, you must go
$\qquad$ and $\qquad$ .
(up or down) and (right or left)
10. Sandra lives halfway between $A$ and $B$. Which of these coordinates describes the location of her house?
a. $(1,2)$
b. $(3,-3)$
c. $(-5,0)$



1. Vanessa's hens laid 80 eggs today. How many cartons holding a dozen each can she fill completely? $\qquad$
2. If the digits in the number 23 are reversed, what is the difference between the original number and the new number? $\qquad$
3. If $x=7$, then $-x=$ $\qquad$ .
4. Summer school classes begin at 8:30 and last for two and a half hours. At what time do the classes end? $\qquad$
5. If $x^{3}<5$, then $x$ could NOT equal: $\quad 5 \quad-6 \quad 0 \quad-10$
6. Fill in the empty boxes.

| 12 | 28 | 63 |  |
| :--- | :--- | :--- | :--- |
| 21 | 82 |  | 27 |

7. Would the number $\frac{1}{5}$ be closer to $10 \%, 25 \%$, or $50 \%$ ? $\qquad$
8. Use the pattern rule to complete the sequence.

Multiply by 3 , then add 1

$$
1,4,13,40,
$$

$\qquad$
9. $6 \cdot 2+(-3)(4)=$

$$
2^{2}-\sqrt{25}=
$$

10. Complete the crossword using the clues.

## Across

1. $12 \cdot 4=$
2. One and a half dozen is $\qquad$ .
Down
3. $9^{2}=$
4. 8 dimes $=$ $\qquad$ cents.


5. If today is Sunday, three days ago was $\qquad$ .
6. Ken paid $\$ 30$ for a jacket that was $50 \%$ off. What was the original price? $\qquad$
7. The answer to $\sqrt{28}$ is a $\qquad$ .

Circle: decimal or whole number 4. If $x=-5$, then $-x=$ $\qquad$ .
5. Fill in the empty boxes.

| $\frac{3}{4}$ | $\frac{5}{11}$ |  |
| :--- | :--- | :--- |
| $\frac{4}{3}$ |  | $\frac{15}{4}$ |

6. Which of the following are common factors for the numbers 20 and 30 ?

$$
\begin{array}{lllllll}
2 & 4 & 5 & 6 & 10 & 15 & 20
\end{array}
$$

For Problems 7-9, use the grid to the right.
7. If the right triangle's dimensions are enlarged three times, the new base and height would be $\qquad$ units and $\qquad$ units.
8. What would the area of the enlarged triangle be?

9. The hypotenuse (the longest side) of the enlarged triangle would be:
a. greater than 3
b. less than 3
c. equal to 3


1. If $a$ and $b$ are odd whole numbers, which of the following would also be an odd whole number?
a. $a b$
b. $a+b$
c. $\frac{a}{b}$
2. In the fraction $\frac{1}{8}, 1$ is called the $\qquad$ and 8 is called the $\qquad$ .
3. Is $\sqrt{37}$ closer to 6 or 7 ? $\qquad$
4. $-(6+5)=$
5. $-(-8+4)=$
6. $-(-2)=$
7. If $2 n>12$, then $n$ could equal $\qquad$ .
a. 4
b. 5
c. 6
d. 7
8. Which shape has the greater area? $\qquad$

9. The cylinder has a diameter of 9 inches. The ring has an inside radius of 5 inches. Could the ring slide over the cylinder?


Circle: Yes or No
10. Circle the numbers below that are evenly divisible by 4 .
$\begin{array}{lllll}48 & 505 & 408 & 600 & 102\end{array}$


1. Three months ago, Janelle weighed 90 pounds. If she has gained an average of four pounds per month, what does she weigh now? $\qquad$
2. When you divide fractions, you actually flip the $\qquad$ fraction and then multiply. Circle: first or second
3. How many one-inch cubes can be placed in this four-inch cube? $\qquad$


For Problems 4-5, use the chart to the right.
4. Why do these numbers have arrows drawn between them? $\qquad$
5. Which number in the first column could have gone in the second column? $\qquad$

6. If $2 a-4=a+1$, then $a=$ $\qquad$ .
a. 6
b. 5
c. 4
7. $\frac{1}{2} \times \frac{1}{4} \times \frac{4}{3}=$

For Problems 8-10, use the diagram to the right.
8. This piece of paper was 8 inches by 10 inches before the corner was torn off. What was the area of the paper before the corner got torn off? $\qquad$

9. What is the area of the corner (triangle) that got torn off? $\qquad$
(Hint: The corner was a right triangle that had two-inch legs.)
10. What is the actual area of the paper without the corner? $\qquad$


1. Abraham Lincoln was born in 1809 and died in 1865. For how many years did he live? $\qquad$
2. When you divide fractions, you should $\qquad$ the first fraction by the reciprocal of the second fraction.
a. add
b. subtract
c. multiply
d. divide
3. If $\frac{1}{2} x=6$, then $x=$ $\qquad$ .
4. $2+4 \cdot \square=22$
5. If the pattern continues, what number should be at the top of the steps? $\qquad$

6. If $x=-100$, then $-x=$ $\qquad$ .
7. If $4 a>11$, then $a=$ $\qquad$ .
a. -2
b. 2
c. -3
d. 3
8. 

In order for the scale to balance, $x$ would have to equal $\qquad$


For Problems 9-10, rewrite each problem using exponents.
9. $3 \cdot 3 \cdot 3 \cdot 3 \cdot 2 \cdot 2=$
10. $5 \cdot 5 \cdot 5 \cdot x \cdot x \cdot y \cdot y \cdot y=$


1. To simplify this problem, you can cancel the 6 s (diagonally).

True or False
2. To simplify this problem, you could also reduce $\frac{3}{6}$ to $\frac{1}{2}$.

True or False
3. The final answer to this problem would be $\frac{1}{3}$.

True or False
4. This shape is divided into $\qquad$ .
a. fourths
b. thirds
c. three parts
d. triangles

5. Shade the odd multiples of 7 .

| 7 | 12 | 14 | 18 | 21 | 28 | 35 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

6. Use the numbers $1,2,3$, and 4 to fill in these boxes and make a correct equation.

$$
\square+\square=\square+\square
$$

7. Circle the fractions that are more than $\frac{1}{2}$. $\quad \frac{3}{10} \quad \frac{3}{5} \quad \frac{2}{3} \quad \frac{2}{4} \quad \frac{5}{9}$

For Problems 8-10, use the diagram and chart.
8. There is one road between towns $A$ and $C$, as shown on the diagram. What is the distance between towns A and C by road? $\qquad$

9. Sally lives in town A. On Saturday, she made a round-trip bike ride to town B. How far did she ride? $\qquad$
10. If the bike ride took Sally two hours, solve this

| A | B | 8 miles |
| :---: | :---: | :---: |
| B | C | 4 miles | proportion to find her average speed in miles per hour.

If $\frac{16}{2}=\frac{x}{1}$, then $x=$ $\qquad$ .

For Problems 1-3, use the division problem to the right.
Circle True or False.

$$
\frac{1}{8} \div \frac{3}{4}=
$$

1. To solve this problem, you should rewrite it as $\frac{1}{8} \times \frac{4}{3}$.
2. When dividing fractions, flip the first and multiply by the second. True or False
3. The final answer to this problem would be $\frac{1}{6}$.

True or False True or False

For Problems 4-6, use the coordinate graph to the right.
4. What is the area of the triangle? $\qquad$
5. What is the area of the square? $\qquad$
6. Does the circle or the square have the greatest area?
$\qquad$

7. If $\frac{1}{3} a=1$, then $a=$ $\qquad$ .

For Problems 8-10, evaluate if $a=-3, b=-12$, and $c=6$.
8. $\frac{c^{2}}{b}=$
9. $-2(a+b)=$
10. $\frac{c}{b} \cdot \frac{b}{a}=$


1. 5,000 tennis balls might fill up a $\qquad$ .
a. car
b. house
c. school
2. What is the radius of this circle if the diameter is 12.6 cm ? $\qquad$

3. If $x<3.4$, which of the following could be a value of $x$ ?
a. 4.6
b. 2.8
c. 5.1
4. Complete the table.

| Fraction | Decimal | Percent |
| :---: | :---: | :---: |
| $\frac{3}{5}$ |  |  |

5. $\frac{\sqrt{3^{2}+4^{2}}}{5}=$
6. If $b-4.25=8.25$, then $b=$ $\qquad$ .

For Problems 7-9, use the graph to the right.
7. Jason received the same scores on Test $\qquad$ and Test $\qquad$ .
8. Which of these numbers would be closest to Jason's average score?
a. 93
b. 72
c. 81
9. If there were 50 questions on Test 1, how many did Jason answer correctly? $\qquad$
Jason's Test Scores

10. $\frac{-250}{-5}=$
$(-3)+(-4)-(5)=$

| Minute 1 <br> 1. 49 <br> 2. <br> 3. $0.034,0.340,0.403$ <br> 4. $3 / 10$ <br> 5. 7 <br> 6. 17 <br> 7. 12 sq. units <br> 8. 5 <br> 9. $36,63,81$ <br> 10. $4,6,9$ <br> Minute 2 <br> 1. d <br> 2. b <br> 3. $2 / 5,3 / 4$ <br> 4. $7 / 10$ <br> 5. 16 <br> 6. 20 <br> 7. 14 units <br> 8. $A=5, B=20, C=30$ <br> 9. $48,32,56$ <br> 10. $4,6,3$ <br> minute 3 <br> 1. 5:56 <br> 2. 6 <br> 3. $2 / 8,1 / 4$ <br> 4. < <br> 5. 12 <br> 6. 16 <br> 7. 50 ft . <br> 8. 20 people <br> 9. $36,60,72$ <br> 10. 10, 11, 9 <br> Minute 4 <br> 1. 41.5 <br> 2. c <br> 3. $>$ <br> 4. < <br> 5. 22 <br> 6. 456 <br> 7. Yes <br> 8. A <br> 9. $6,12,18$ <br> 10. 75, 139, 83 <br> Minute 5 <br> 1. a <br> 2. D <br> 3. 10 <br> 4. 2.3 <br> 5. 7 boxes <br> 6. 18 <br> 7. 9 sq. units <br> 8. 3 <br> 9. 21,19 <br> 10. 70, 161 | Minute 6 <br> 1. c <br> 2. C <br> 3. a, b <br> 4. 0.23 <br> 5. 9 miles <br> 6. D24, E28 <br> 7. $63 \mathrm{ft}^{2}{ }^{2}$ <br> 8. Thursday <br> 9. Tuesday and Friday <br> 10. $54,45,35$ <br> Minute 7 <br> 1. d <br> 2. A <br> 3. a, c <br> 4. 0.043 <br> 5. True <br> 6. <br> 7. 18 units <br> 8. Desiree <br> 9. Rick <br> 10. 212, 43, 167 <br> Minute 8 <br> 1. $\$ 5.42$ <br> 2. A <br> 3. B <br> 4. $4 / 9,4 / 16$ or $1 / 4$ <br> 5. $4 / 11$ <br> 6. 16 <br> 7. December, January <br> 8. December <br> 9. $2.9,4.3,12.4$ <br> 10. $88,170,276$ <br> Minute 9 <br> 1. 20, 310, 110 <br> 2. c <br> 3. a <br> 4. a <br> 5. 4 <br> 6. $4 / 5$ <br> 7. A <br> 8. Red <br> 9. 696 pounds <br> 10. $0.72,0.98,2.08$ <br> Minute 10 <br> 1. c <br> 2. a <br> 3. с <br> 4. $3.5,5.1$ <br> 5. 4 <br> 6. $4 / 9$ <br> 7. $B$ <br> 8. 50 eggs <br> 9. 75 eggs <br> 10. 5.7, 10.1, 17.5 | Minute 11 <br> 1. 4,321 <br> 2. d <br> 3. b <br> 4. $2 / 8,3 / 8,7 / 8,8 / 8$ <br> 5. 6 <br> 6. 27 <br> 7. 12 cubes <br> 8. $A=20, B=25, C=4$ <br> 9. $63,64,42$ <br> 10. $15,17,19$ <br> Minute 12 <br> 1. b <br> 2. C <br> 3. a <br> 4. 2 <br> 5. 14 yards <br> 6. 2 out of 40 , or $5 \%$ <br> 7. 30 units <br> 8. 30 glasses <br> 9. $5.8,8.3$ <br> 10. 56,63 <br> Minute 13 <br> 1. $100,2,300,0$ <br> 2. C <br> 3. B <br> 4. $2 / 6$ <br> 5. $12 / 25$ <br> 6. 27 boys <br> 7. True <br> 8. $1 / 7$ <br> 9. $1 / 6,1 / 12,1 / 30$ <br> 10. $30,63,72$ <br> Minute 14 <br> 1. 4, 8 <br> 2. a <br> 3. $5 / 15$ <br> 4. 10 <br> 5. 9 <br> 6. $1 / 4$ <br> 7. a and c <br> 8. b <br> 9. $2.5,3.25,20.5$ <br> 10. $5,6,5$ <br> Minute 15 <br> 1. $\$ 1.00$ <br> 2. <br> 3. с <br> 4. $>$ <br> 5. $=$ <br> 6. 2 <br> 7. 20 ft . <br> 8. 5 <br> 9. $125,150,250$ <br> 10. 31, 102 | Minute 16 <br> 1. 541 <br> 2. B <br> 3. a <br> 4. d <br> 5. 4 <br> 6. 21 <br> 7. $45 \mathrm{ft}^{2}{ }^{2}$ <br> 8. Class 2 <br> 9. 5 more girls <br> 10. 1.2, 13.05, 3.5 <br> Minute 17 <br> 1. $\$ 2.67$ <br> 2. c <br> 3. $>$ <br> 4. $>$ <br> 5. 9 <br> 6. B <br> 7. $3 / 9$ or $1 / 3$ <br> 8. Jared <br> 9. Jackie <br> 10. 250, 125, 250 <br> Minute 18 <br> 1. a <br> 2. d <br> 3. $5.60,5.06,0.56,0.056$ <br> 4. $2 / 6,3 / 9$ <br> 5. No <br> 6. A <br> 7. $2 / 5$ <br> 8. 52 <br> 9. $26,25,29$ <br> 10. $5,9,11$ <br> Minute 19 <br> 1. b <br> 2. <br> 3. $4 / 15$ <br> 4. $1 / 2$ <br> 5. less <br> 6. 4 <br> 7. 40 <br> 8. 7,200 <br> 9. $63,150,36$ <br> 10. 7, 7, 3 <br> Minute 20 <br> 1. b <br> 2. a <br> 3. $6 / 35$ <br> 4. 5 people <br> 5. 4 people <br> 6. 3 people <br> 7. 7 <br> 8. I <br> 9. $7.5,11.2,22.9$ <br> 10. $30,12,70$ |
| :---: | :---: | :---: | :---: |





Minute 61

1. $130,3,000,488$

6 cubes
4
5
$1 / 10$ or $10 \%$
3,384
50
1
9. B and E
10. 4, 5, 1

## Minute 62

. c
2. b
3. +

False
17
G
$35 / 4$
$14 / 5$
9. $32.7,3.27,0.0327$
10. $4.6,14$

## Minvte 63

2, 3, 6
$(4,4)$
$3 \cdot 3 \cdot 3=27$
$\sqrt{36}$
c
81
12 units
Saturday
Tuesday and Wednesday
10. $-24,30,-56$

Minute 64
. b
$(4,3)$
$112 / 3$
4,12
31
2
0.03
. 1,000
9. $3,-5,-3$
10. $64,-45,-63$

## Minute 65

1. Prime $=c$, Factors $=a$, Multiples $=\mathrm{b}$
3 units
c
2
16
5
$5^{3}$
1 month
(-5)(-5)
2. $-13,9$

Minute 66

1. Improper $=\mathrm{c}$, Mixed $=\mathrm{b}$, Reciprocal $=\mathrm{a}$
2. 36 units
3. $1 / 2$
4. 100
5. $1,2,4,8$
6. $5 / 8$
7. b
8. a
9. c
10. d

Minute 67

1. b
2. a
3. True
4. 24
5. 3
6. $33 / 4$
7. $5^{2}$
8. $-5,-2,0,7,8$
9. $-11,5,-11$
10. $48,-48,-3$

## Minute 68

1. d
2. b
3. c
4. 4
5. $-6,18$
6. 20
7. 8,15
8. 0
9. 48
10. $61 / 2$

## minute 69

1. a
2. c
3. Multiples of 7: 14, 21, 28

Factors of 24: 3, 2, 4, 6, 8
4. True
5. False
6. True
7. $-6,-5,0,4,10$
8. 2 and 6
9. $3,-1$
10. $-1,278,-171$

## Minute 70

1. $1 / 4$
2. 9
3. 16
4. $a=3, b=100$
5. $2 / 3$
6. 4
7. -10
8. 8
9. -30
10. $1 / 8,3 / 4$

## Minute 71

1. a
2. Equilateral $=b$, Scalene $=c$, Isosceles $=\mathrm{a}$
3. 4 hops
4. Multiples of 5: 10, 20, 25

Factors of 18: 3, 2, 6
5. A
6. d
7. c
8. $1 / 3,5 / 12,1 / 5$
9. $56,-40,-32$
10. $-12,-12,2$

## Minute 72

. 30 and 15
2. 25 sq. units
3. $1 / 20,0.05$
4. $3 / 8$
5. a
6. $5^{2}$
7. $8 / 5$
8. 6
9. $21 / 5,28 / 5,19 / 10$
10. $2 / 9,-(8 / 35)$

## MINUTE 73

1. No
2. 18 sq. units
3. Blue
4. $7 / 16$
5. 4,14
6. 30
7. $2 / 7$
8. $(5,2)$
9. 7
10. All of them

Minute 74
. $5 / 2$
2. 48 cubic units
3. 20
4. b
5. d
6. c
7. a
$\begin{array}{ll}\text { 7. } & \mathrm{a} \\ \text { 8. } & -12\end{array}$
9. -60
10. -2

## Minute 75

1. 16,10
2. 45 cubic units
3. 0.65 or $65 \%$
4. 6
5. 121
6. 4
7. $8 / 3$
8. $(2,3)$
9. $(-2,-3)$
10. $5,-15,-8,18$

## Minute 76

1. 1,700
2. 9 sq. units
3. $1.5,150 \%$
4. Tile A
5. 0
6. -25
7. 2
8. $(-2,3)$
9. 6 units
10. b

Minute 77

2. 1
3. 5
4. $9 / 14,11 / 17$
5. 34
6. 6
7. 8
8. 126
9. $6,12,18$
10. 13.86, $0.1386,0.01386$

## minute 78

$\$ 29.30$
d
3. $9 / 4$ or $21 / 4$
4. $2 / 4$
5. $2 / 6$
6. $=$
7. <
8. <
9. 22,967
10. 1,967

## Minute 79

1. 3 yards

9/14
3. c
4. d
5. c
6. a
7. b
8. 2 sections
9. 4 sections
10. $-6,-27,-12,-3$

## Minute 80

1. c
2. 24 units
3. c
4. a
5. d
6. b
7. lost money
8. made money
9. $2,6,10$
10. 9

