

Mathematics 100-800
Diagnostic Tests
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***** **NOTE:** *****
If provided, remove the answer key from the center section of this booklet.



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MATHEMATICS 100-800

PLACEMENT TEST for the LIFEPAC CURRICULUM

Instructions

This test is designed to aid the teacher in proper placement of the student into the LIFEPAC curriculum. It has two sections: the Student Test and the Answer Key. The Answer Key is an insert in the Student Test and may be removed when testing begins.

This is not a timed test and the student should be given an opportunity to answer each question adequately. If the student becomes bogged down and the test seems too difficult, skip to the next section. If the test is still too difficult, this child's academic skill level has been reached and testing may stop. Each test level should take no longer than one hour. Students should not use a calculator for any of the tests.

Testing should begin approximately two grade levels below the student's current or just completed grade level. For example, a student entering fifth grade [500] should begin testing at the third grade [300] level. (Of course, a second grader could not test below the first grade level [100]). This allows for proper grade level placement as well as identification of any learning gaps that the student may have.

Once the test has been administered, it is ready to be scored. The teacher or parent does all of the scoring except for those who are using one of our placement services. Use the Answer Key to mark all incorrect answers on the Student Test. Next, record the total number of **correct** answers in the box beneath the LIFEPAC number in the left hand column. **Each numbered question equals one point.** When all tests have been graded, transfer the number correct by LIFEPAC to the Student Placement Worksheet on page AK-16 of the Answer Key. Then add the total number of points per grade level.

Test	Level	Test	Level	Test	Level	Test	Level
101 - 110	Level 1	201 - 210	Level 2	301 - 310	Level 3	401 - 410	Level 4
501 - 510	Level 5	601 - 610	Level 6	701 - 710	Level 7	801 - 810	Level 8

FIRST GRADE TEST ADMINISTRATORS: Test administrators may assist students in reading instructions when necessary; however, care should be taken as too much support may alter test results. First grade students may answer questions on the test pages or the right hand column. The right hand column is available for test administrators to mark whether the response was correct or incorrect. Each question equals one point. There are ten possible points per section. Put all answers on the blanks to the right of the questions unless instructed to do otherwise.

Write the missing numbers.

1. 49, _____, _____, 52

2. 84, _____, _____, 87

1. _____

3. Circle the numbers greater than 48.

93 62 36

4. less than 51.

25 43 79

2. _____

3. _____

5. Circle the short one.



4. _____

5. _____

6.
$$\begin{array}{r} 3 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ +2 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 7 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ -0 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ -3 \\ \hline \end{array}$$

6. _____

7. _____

8. Write the numbers in order.

14 18 2 6 15 _____

8. _____

9. Measure. _____ inches

9. _____

10. Circle the triangle.



10. _____

1.
$$\begin{array}{r} 6 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ +4 \\ \hline \end{array}$$

2. $4 + 3 = \underline{\quad}$

1. _____

$1 + 9 = \underline{\quad}$

2. _____

3.
$$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ -9 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -2 \\ \hline \end{array}$$

$3 + 0 = \underline{\quad}$

3. _____

5. $8 - 6 = \underline{\quad}$

4. _____

4.
$$\begin{array}{r} 10 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ +0 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ +6 \\ \hline \end{array}$$

$10 - 2 = \underline{\quad}$

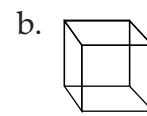
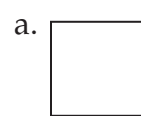
5. _____

$9 - 3 = \underline{\quad}$

6. Match.

4 seven
8 four
3 eight
7 three

7. Circle the shape that has an inside and outside.



6. _____

7. _____

7. _____

8. Write how many.



tens _____ + ones _____

8. _____

9. Write what comes next. 1 2 3, 3 2 1, 1 2 3, _____

9. _____

10. Circle the fourth banana.

10. _____

105

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

2. Match the number to the word.

1 2 3 4 5 6

third _____ sixth _____

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



4. Circle $\frac{1}{4}$.



5. Draw what comes next.



6. Write the time.

_____ : _____ o'clock



7. Match.

17	fifteen
19	seventeen
15	thirteen
13	nineteen

8. Mark read 2 pages in his book on Monday, 4 pages on Tuesday, and 6 pages on Wednesday. How many pages do you think he read on Thursday? _____

9. $23¢ =$ _____ dimes + _____ pennies

10. How many in a dozen? _____

106

1.
$$\begin{array}{r} 9 \quad 10 \quad 7 \quad 8 \\ -5 \quad -3 \quad -5 \quad -7 \end{array}$$

2. Add and check.

_____	_____
4	3
2	5
<u>+6</u>	<u>+2</u>

Write a number sentence.

3. 7, 5, 2 _____ 4. four, six, ten _____

Write the missing numbers. Circle the answer.

5. 5, _____, 15, _____, _____, 30 6. $19 (>, <) 24$ $72 (>, <) 69$

7. $69¢ =$ _____ dimes + _____ nickels + _____ pennies

8. Write the time.

_____ : _____ o'clock



9.
$$\begin{array}{r} 22 \quad 60 \quad 73 \\ +41 \quad +35 \quad +14 \end{array}$$

10. Ben has 4 nickels, Corey has 2 nickels, and Jason has 5 nickels. How many nickels do they have altogether? _____



Circle the numbers greater than 132.

143 115 192

2. less than 176.

104 185 160

3. Write AM or PM. I go to bed at night. _____.

4. Write the fraction.



5. Use both 7 and 2 to write a big ____ and a little ____ number.

Circle the answer.

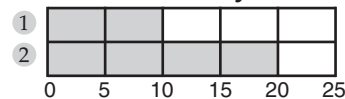
6. $3 + 5$ ($>$, $<$) $2 + 4$

7. $12 - 7$ $11 - 8$ $11 - 3$ $11 - 4$

8. Four plus three ($=$, \neq) eight.

9. Write 100's, 10's, 1's. $138 =$ _____ + _____ + _____

10. Write how many.



1 _____ **2** _____



1. $13 - 5$ $17 - 8$ $14 - 6$ $16 - 7$

2. Write the time.



_____ : _____ o'clock

3. Measure. _____ inches.

Write the number word.

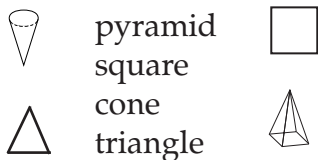
4. 56 _____

5. $\frac{3}{4}$ _____

6. Circle the closest 10's number to 26. 20 26 30

7. Write the number. $100 + 60 + 5 =$ _____

8. Match.



9. Write the missing numbers.

153, _____, _____, 156, _____


10. Write what comes next. Monday, Tuesday, Wednesday, _____

203



1. $6 + 4 - 3 = \underline{\quad}$ $15 - 7 + 3 = \underline{\quad}$
2. a. Write how many. $135 = \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ ones.
b. Write the value. $135 = \underline{\quad}$ + $\underline{\quad}$ + $\underline{\quad}$.
3.
$$\begin{array}{r} 35 \\ + 49 \\ \hline \end{array}$$


$$\begin{array}{r} 18 \\ + 56 \\ \hline \end{array}$$
4.
$$\begin{array}{r} 62\text{¢} \\ + 35\text{¢} \\ \hline \end{array}$$

$$\begin{array}{r} \$8.39 \\ - \$4.15 \\ \hline \end{array}$$
5. Are paper clips or inches standard measurements?
6. Write how many.
 \$3.38 = $\underline{\quad}$ dollars + $\underline{\quad}$ dimes + $\underline{\quad}$ nickels + $\underline{\quad}$ pennies
7. Round to the nearest 10. 38 13
8. a. Write in numbers. one hundred four
b. Write in words. 153
9. How many oranges in $\frac{4}{6}$ of a set of 6 oranges?
10. Write the sign. 76 ($>$, $<$) 75 16 ($=$, \neq) $8 + 7$






1. /
- 2a. /
- /
- /
3. /
4. /
5. /
6. /
- /
7. /
- 8a. /
- /
9. /
10. /

204



1. Write the missing numbers. 498, 499, $\underline{\quad}$, $\underline{\quad}$
2. a. Write in numbers. seven hundred nineteen
b. Write in words. 601
3. a. Write how many. $804 = \underline{\quad}$ hundreds + $\underline{\quad}$ tens + $\underline{\quad}$ ones.
b. Write the value. $804 = \underline{\quad}$ + $\underline{\quad}$ + $\underline{\quad}$.
4. Write cents in coins. Use each coin.
 \$.89 = $\underline{\quad}$ quarters + $\underline{\quad}$ dimes + $\underline{\quad}$ nickels + $\underline{\quad}$ pennies
5.
$$\begin{array}{r} 347 \\ + 601 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ + 49 \\ \hline \end{array}$$
6.
$$\begin{array}{r} 65 \\ - 23 \\ \hline \end{array}$$

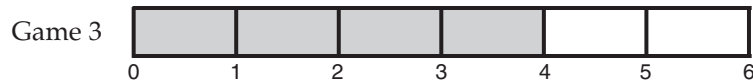
$$\begin{array}{r} 728 \\ - 517 \\ \hline \end{array}$$
7. Write how many. $\underline{\quad}$ inches = 1 foot $\underline{\quad}$ feet = 1 yard
8. Find the solid shapes.
a.  b.  c.  d.  e. 
9. Round to the nearest 10. 62 87
10. The toy car cost 63¢. You paid 6 dimes and 1 nickel. How much change did you receive?

1. /
- 2a. /
- /
- 3a. /
- /
4. /
5. /
6. /
7. /
8. /
9. /
10. /

205



1. Write the symbols. $7 + 9$ ($>$, $<$) $6 + 8$ $12 - 7$ ($=$, \neq) $13 - 8$
2. The graph tells the number of matches in the game.
How many matches in Game 3?

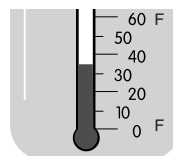


3. Count by 3's. Write the numbers.
1 2 3 4 5 6 7 8 9 10 11 12
4. Use all of the numbers 5, 3, and 9 to write the
(a.) largest and (b.) the smallest number.

5.
$$\begin{array}{r} \frac{1}{5} \\ + \frac{2}{5} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{3}{8} \\ + \frac{4}{8} \\ \hline \end{array}$$

6. Write the temperature.



7.
$$\begin{array}{r} 258 \\ + 307 \\ \hline \end{array}$$

$$\begin{array}{r} 429 \\ + 143 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 36 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 584 \\ - 253 \\ \hline \end{array}$$

9. How many in a dozen? _____
10. Write the ordinal number word for fifteen.

206



1. Write the time.



2.
$$\begin{array}{r} \frac{2}{7} \\ + \frac{3}{7} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{7}{12} \\ - \frac{5}{12} \\ \hline \end{array}$$

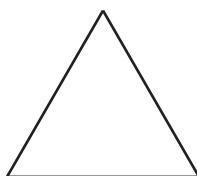
3.
$$\begin{array}{r} 237 \\ + 349 \\ \hline \end{array}$$

$$\begin{array}{r} 356 \\ + 206 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 62 \\ - 28 \\ \hline \end{array}$$

$$\begin{array}{r} 71 \\ - 46 \\ \hline \end{array}$$

5. Measure the sides.
Write the perimeter.



6. a. Write how many. $932 =$ ___ hundreds + ___ tens + ___ ones.
b. Write the value. $932 =$ _____ + _____ + _____.

7. Write in dollars and cents. 2 dollars, five quarters, 2 dimes

8. Write how many. ___ inches = 1 yard ___ ounces = 1 pound

9. Write in number order. 356 563 365 536

10. Name the shape
that does not belong.



1. _____ / _____
2. _____
3. _____
- 4a. _____ b. _____
5. _____ / _____
6. _____
7. _____ / _____
8. _____ / _____
9. _____
10. _____
1. _____
2. _____ / _____
3. _____ / _____
4. _____ / _____
5. _____
- 6a. _____ / _____
- b. _____ / _____
7. _____
8. _____ / _____
9. _____ / _____
10. _____

207



- Write in words. $\frac{2}{7}$
- | | | | |
|------|-------|-------|-------|
| 40 | 146 | 636 | 270 |
| 24 | + 352 | + 249 | + 345 |
| + 12 | | | |

87	849	63	86
- 46	- 527	- 25	- 27
- Tell the pattern. 48, 46, 44, ...
- Write the months in order.
___ June ___ May ___ August ___ July
- Round. Write the answer.
If you have 58 pennies, you have close to ___ pennies.
- Write how many. ___ hours = 1 day ___ days = 1 week
- | | |
|-----------------|------------------|
| $\frac{2}{4}$ | $\frac{6}{12}$ |
| + $\frac{1}{4}$ | - $\frac{2}{12}$ |
- When we count by 2's, the numbers end in
___, ___, ___, ___, or ___.
- Read the graph. Write the temperature for Friday.



- _____
- _____/_____
_____/_____
- _____/_____
_____/_____
- _____
- _____/_____
_____/_____
- _____
- _____/_____
- _____/_____
_____/_____
- _____/_____
_____/_____
- _____

208



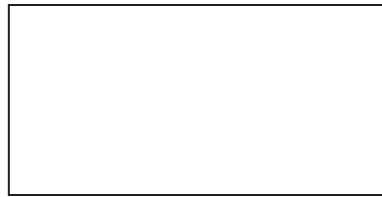
- Write the next problem in the pattern.
 $3 + 0 = 3$, $3 + 1 = 4$, $3 + 2 = 5$, ...
- $5 + 7 - 2 =$ ___ $15 - 9 + 8 =$ ___
- Complete the number sentences.
 $15 (+, -) 8 = 2 + 5$ $14 - 6 > 5 (+, -) 3$
- Write the fewest number of coins possible.
 $87¢ =$ ___ quarters + ___ dimes + ___ nickels + ___ pennies
- Tell the order.
The triangle is the ___ shape. ○ □ ▭ ○ △ □ ▭
- Write the perimeter measurement.
- $\frac{3}{5}$ of a set of five apples is ___ apples.
- Tell the direction of the arrow. → north, south, east, west
- Write how many. ___ cups = 1 pint ___ quarts = 1 gallon
- | | | | |
|----------|-------|-------|------|
| \$4.36 | 365 | 452 | 53 |
| + \$2.48 | + 547 | + 368 | - 29 |

- _____
- _____/_____
_____/_____
- _____/_____
_____/_____
- _____/_____
_____/_____
- _____
- _____
- _____
- _____
- _____/_____
_____/_____
- _____/_____
_____/_____

209



Measure the rectangle.



- a. length = ____ b. width = ____
- a. perimeter = ____ b. area = ____
- Write the numbers in the hundreds' place. 307 609
- Measure. _____
- Write in numbers. a. five-sevenths nine hundred four
Write in words. b. $\frac{4}{9}$ 378
- Write the answer. $53 + 6 - 7 =$ ____
- Write the operation symbol.
 $6 + 8$ ($>$, $<$) 15 $14 - 6$ ($=$, \neq) 8
- Is the answer to the problem an even or odd number?
 $15 + 6 =$ ____
- 46 386 473 $\frac{2}{7}$ 10. 65 573 732 $\frac{6}{15}$
 $\begin{array}{r} 34 \\ + 239 \\ + 27 \end{array}$ $\begin{array}{r} + 187 \\ + \frac{3}{7} \end{array}$ $\begin{array}{r} - 28 \\ - 367 \\ - 509 \end{array}$ $\begin{array}{r} - \frac{4}{15} \end{array}$

1. _____ / _____
2. _____ / _____
3. _____ / _____
4. _____
- 5a. _____ / _____
b. _____
6. _____
7. _____ / _____
8. _____
9. _____ / _____
10. _____ / _____

210



- Round to the nearest 100. 637 750
- Jenny poured 3 quarts of water into a gallon container. How many more quarts did she need to pour to fill the container?
- Is the answer even or odd? odd + even = ____
- a. Write in numbers. five dollars and thirteen cents
b. Write in words. \$8.06
- Write the values. $754 =$ ____ + ____ + ____
- Write the time on the digital clock.
- Add the fractions.
- Write the symbols to make the number sentences true. +, -, =
a. 47 ____ 41 ____ 6 b. 83 ____ 5 ____ 88
- Write what comes next. $\frac{1}{7}, \frac{2}{7}, \frac{3}{7}, \dots$
- $\begin{array}{r} 368 \\ + 448 \end{array}$ $\begin{array}{r} \$4.59 \\ + \$3.16 \end{array}$ $\begin{array}{r} 854 \\ - 619 \end{array}$ $\begin{array}{r} \$9.52 \\ - \$7.39 \end{array}$

1. _____ / _____
2. _____
3. _____
- 4a. _____
b. _____
5. _____ / _____
6. _____
7. _____
- 8a. _____ / _____
b. _____ / _____
9. _____
10. _____ / _____

301



- There are ten digits altogether. Write any two of the digits.
- Write the number words in digits. nine hundred five
- Write the numbers in number order.
351 62 14 845 315 291

- Write the value of 7 in 783.
- $8 - 6 + 7 + 5 = \underline{\quad}$ $13 + 5 - 9 - 6 = \underline{\quad}$
- | | | | |
|--------------|--------------------------------|--------------|--------------------------------|
| 243 | $427 + 38 = \underline{\quad}$ | 773 | $369 - 48 = \underline{\quad}$ |
| <u>+ 409</u> | | <u>- 241</u> | |
- How many ... inches in a foot? feet in a yard?
- Write sentences using digits and operation symbols.
Seventeen minus eight is not equal to six.
Four plus five is greater than twelve minus seven.
- Write an ordinal number word.
Forty-six is the number in the row.
5 18 23 46 52 63
- Benny had 37 pennies. He spent 14 pennies in the gumball machine. **How many pennies does Benny have now?**

- _____
- _____
- _____
- _____
- _____
- _____ / _____
- _____ / _____
- _____ / _____
- _____
- _____
- _____
- _____

302



- Write the next number in the number pattern.
Write even or odd. 2, 4, 6, 8, , ...
- | | | | |
|--------------|--------------------------------|-------------|-------------------------------|
| 547 | $358 + 69 = \underline{\quad}$ | 93 | $81 - 43 = \underline{\quad}$ |
| <u>+ 285</u> | | <u>- 57</u> | |
- Write the value of the underlined digits. 387 904
- The minuend is 86 and the subtrahend is 32.
What is the difference?
- When counting by 5's, the numbers end in or .
- In the fraction $\frac{4}{5}$, the 4 is the (a. denominator b. numerator).
- Write the correct symbol.
 $9 + 6$ (>, <) $5 + 8$ $16 - 8$ (=, \neq) $5 + 4$
- Connect the end points AB, BC, CD, DA. A • • B
Name the shape. D • • C
- Write the amount of coins ... in cents. in dollars and cents.



- _____ / _____
- _____ / _____
- _____ / _____
- _____
- _____ / _____
- _____
- _____ / _____
- _____
- _____ / _____
- _____

303

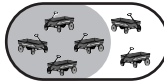



- Write the fact family for 6, 0, 6.

- Write the number in words. 709
- $$\begin{array}{r} 389 \\ + 490 \\ \hline \end{array}$$

$$457 + 386 = \underline{\quad}$$

$$\begin{array}{r} 932 \\ - 471 \\ \hline \end{array}$$

$$625 - 308 = \underline{\quad}$$
- _____ ounces = 1 pound
 _____ pints = 1 quart
 _____ pounds = 1 ton
 _____ quarts = 1 gallon
- Use all of the digits 6, 3, and 8 to write the largest number and to write the smallest number.
- Write a number sentence.
Joseph read 8 pages in his book. Katie read 7 pages in her book. Together, they read 15 pages.
- Write fractions in digits. three-fifths eight-ninths
- Write the fraction that represents ... the shaded part of the set.
the whole set of wagons. 
- What time of day does it change from Monday to Tuesday?
- Measure line segment AB. 

- _____

- _____

- _____

- _____

- _____

- _____
- _____

- _____

- _____
- _____


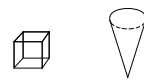
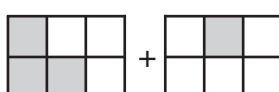
304



- Write the place of the underlined digit. 6,352
- $$\begin{array}{r} 275 \\ 364 \\ + 186 \\ \hline \end{array}$$

$$\begin{array}{r} 87 \\ - 29 \\ \hline \end{array}$$

$$\begin{array}{r} 832 \\ - 546 \\ \hline \end{array}$$

$$\begin{array}{r} 954 \\ - 287 \\ \hline \end{array}$$
- Add the rounded numbers. 48 rounds to _____
23 rounds to + _____
- Measure line segment CD. 
- _____ cups = 1 pint
 _____ ounces = 1 pint
 _____ months = 1 year
 _____ inches = 1 yard
- Write the number word. 5,806
- Write the money in dollars and coins. \$4.73
Choose from dollars, quarters, dimes, nickels, pennies.
- Write Roman numerals in Arabic numerals. XXVI
- Name the solid shapes. 
- Add the fractions.
Write the answer in words.  = _____

- _____
- _____

- _____
- _____
- _____

- _____
- _____
- _____
- _____
- _____

305

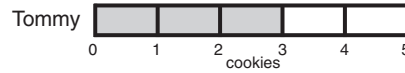


1. $\frac{3}{8} + \frac{4}{8}$ $\frac{5}{12} + \frac{4}{12}$ $\frac{8}{9} - \frac{2}{9}$ $\frac{4}{5} - \frac{1}{5}$

2. Write the temperature.

ice = ___ degrees F. steam = ___ degrees F.

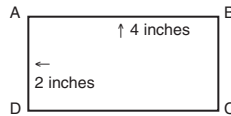
3. Write the number of cookies that Tommy ate.



4. Add the rounded numbers.

232 rounds to _____
486 rounds to + _____

5. Suppose Line AB is 4 inches.
Suppose Line AD is 2 inches.
What is the perimeter?



6. Write the names of the plane shapes.

Draw a line of symmetry through each plane shape.



7. When adding an even and odd number together, the answer is always (a. even b. odd).

8. Write Roman numerals in Arabic numerals. XIV

9. Find the pattern. Write what comes next. 3, 6, 9, 12, ...

10. Lisa said that vacation will begin in two months and 5 days. If it is April 9 today, what day will vacation begin?

306

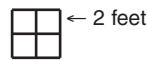


1. $5,386 + 2,437$ $4,093 + 3,549$ $836 - 467$ $9,658 - 7,542$

2. Write the multiples of 2 from 2 to 20.

3. _____ seconds = 1 minute _____ square inches = 1 square foot
_____ days = 1 year _____ square feet = 1 square yard

4. Measure the perimeter.
Measure the area.



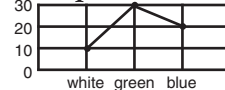
5. $\frac{3}{7} + \frac{2}{7} =$ _____ $\frac{6}{9} - \frac{2}{9} =$ _____

6. $\$2.36 + \$.41$ $\$5.67 + \1.38

7. Write in digits and operation signs.

Eight plus six is not equal to five plus seven.

8. Tell how many cars are blue.



9. Tell which drawing illustrates ...

a line segment. an angle. a. b.

10. Melinda had \$5.34 to spend. She spent \$2.63 on a drawing book and 85¢ on pencils. What was her change?

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

307



1. Write multiples.

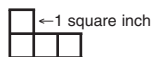
$6 \times 2 = \underline{\quad}$ $3 \times 5 = \underline{\quad}$ $9 \times 2 = \underline{\quad}$ $5 \times 5 = \underline{\quad}$

2. Write in words.

 $\frac{4}{7}$ $3\frac{2}{8}$

3.	$4,672$	$5,013$	$8,708$	$7,540$
	$-1,936$	$-2,395$	$-4,279$	$-2,857$

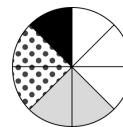
4. Measure the perimeter.
-
- Measure the area.



5.	$5\frac{3}{7}$	$9\frac{5}{6}$
	$+2\frac{2}{7}$	$-3\frac{1}{6}$

6. Write in Roman numerals. 59

7. The spinner is divided into sections that are white, gray, black, and dotted. If the spinner is turned, what is the probability it will stop on white?



- 8.
- $67 + \underline{\quad} = 152$
- because
- $152 - \underline{\quad} = 67$

9. Write the number of cents.

1 quarter + 2 dimes - 3 nickels + 2 pennies

10. In which number does the digit 4 have the greatest value?

3,460 9,004 4,132 6,348

308



1. Choose from faces, angles, closed lines, squares, rectangles.
-
- The sides of solid shapes are named ____.

____ are formed when two lines meet at an end point.

2. 4 yards = ____ feet 2 gallons = ____ quarts

3. Find the missing numbers.

18	253
??	437
$\frac{45}{97}$	$\frac{??}{864}$

4. Write the fraction for the decimal. .4

5. Write numbers for number words.

four thousand, seven hundred six two thousand, eight

6.	$3\frac{2}{9}$	$2\frac{3}{4}$	7.	$8,000$	$7,003$
	$+4\frac{5}{9}$	$+5\frac{1}{4}$		$-4,638$	$-3,849$

8. Write the multiples.

$7 \times 2 = \underline{\quad}$ $6 \times 5 = \underline{\quad}$ $8 \times 3 = \underline{\quad}$ $4 \times 10 = \underline{\quad}$

9. Circle two thirds of the set of balls.
-
- How many balls is that?



10. Mary, Jo, and Ashlee had completed their math tests. Mary had a score of 87. Jo scored 5 points less than Mary. Ashlee scored 3 points more than Jo. What was Ashlee's score?

1. $\frac{\quad}{\quad}$

2. _____

3. $\frac{\quad}{\quad}$

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____





8. _____

9. _____

10. _____

309



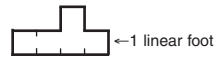
- Write in digits. two-ninths seven and three-eighths
- Shade the part that shows the fraction. Write yes or no to tell if they are equal. $\frac{3}{4}$  $\frac{6}{8}$ 
- $6,351 + 93 + 578 = \underline{\hspace{2cm}}$ $4,301 - 632 = \underline{\hspace{2cm}}$
- Write the correct symbol.
 $7 + 6 - 4$ ($=$, \neq) $15 - 8 + 2$ $80 - 50$ ($>$, $<$) $40 + 20$
- Write the temperatures. Choose from 0, 32, 100, 212.
 freezing = $\underline{\hspace{1cm}}$ degrees Fahrenheit = $\underline{\hspace{1cm}}$ degrees Celsius
- Write the name of the shape. a.  b. 
- Write answers to multiplication facts.
 $6 \times 3 = \underline{\hspace{1cm}}$ $8 \times 4 = \underline{\hspace{1cm}}$ $10 \times 5 = \underline{\hspace{1cm}}$ $9 \times 2 = \underline{\hspace{1cm}}$
- Round to thousands' place. 7,326 8,540
- Write in Roman numerals. 537
- Jody had planned one hour and twenty minutes to complete her reading assignment. How many minutes was that?

- /
-
- /
- /
- /
-
- / /
- /
-
-

310



- Round the numbers. Estimate the answer.
 $2,469 + 3,571 + 1,963 = \underline{\hspace{2cm}}$ $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} =$
- | | | | |
|--|---|---|---|
| $\begin{array}{r} 542 \\ 365 \\ + 409 \\ \hline \end{array}$ | $\begin{array}{r} 6,391 \\ + 2,885 \\ \hline \end{array}$ | $\begin{array}{r} 9,003 \\ - 2,541 \\ \hline \end{array}$ | $\begin{array}{r} 8,052 \\ - 4,058 \\ \hline \end{array}$ |
|--|---|---|---|
- Write the multiples for 4 from 4 to 40.
- | | | | |
|---|---|---|---|
| $\begin{array}{r} \frac{4}{9} \\ + \frac{3}{9} \\ \hline \end{array}$ | $\begin{array}{r} 6\frac{1}{5} \\ + 2\frac{4}{5} \\ \hline \end{array}$ | $\begin{array}{r} \frac{7}{8} \\ - \frac{4}{8} \\ \hline \end{array}$ | $\begin{array}{r} 3\frac{6}{7} \\ - 1\frac{2}{7} \\ \hline \end{array}$ |
|---|---|---|---|
- Write answers to multiplication facts.

$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 3 \\ \hline \end{array}$
--	--	--	---
- Write the perimeter. Write the area. 
- There are 10 fish in the pond. 4 are goldfish. If you went fishing, what is the probability that you would catch a goldfish?
- Complete the two step problem.
 $19 - (6 + 3) = \underline{\hspace{2cm}}$
- Find the pattern. Write what comes next.
 $7 + 8 = 15,$ $8 + 7 = 15,$ $15 - 7 = 8,$...
- Jason drank $\frac{3}{8}$ of his glass of milk. How much milk was there left in the glass to drink?

-
- / /
-
- / /
- / /
-
- out of
-
-
-

401



1. List the digits between 0 and 5.
2. Write a multi-digit number with 5 in the tens' position, 6 in the one's position, 0 in the hundreds' position, and 4 in the thousands' position.
3. In the problem $8 - 6 = 2$, the difference is (a.), the minuend is (b.) and the subtrahend is (c.).
4. What number is missing from the sequence? 3, 6, , 12, 15...
5. Write the digits. seventy dollars and four cents
6. Expand 8,059. + + +
7. Write the number 6 in words as an ordinal number.
8. Write the numbers 4 and 9 as a fraction with 9 as the denominator and 4 as the numerator.
9. Write eleven-twelfths as a fraction.
10. Complete these facts.
 a. $5 \times 4 =$ b. $8 \times 3 =$ c. $2 \times 9 =$

1. _____
2. _____
- 3a. _____
- b. _____
- c. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
- 10a. _____
- b. _____
- c. _____

402



- Write the correct symbol.
1. 6,835 <, > 6,358
 2. 748 =, ≠ 784
 3. Round to the nearest 10. a. 85 b. 236
 4. Round the numbers to the nearest hundred. $249 =$ _____
 Find the estimated answer. $+326 =$ _____
 5.
$$\begin{array}{r} 603 \\ \times 3 \\ \hline \end{array}$$
 6a. $\frac{7}{8}$ b. $\frac{4}{9}$

$$\begin{array}{r} + \frac{1}{8} \\ \hline \end{array}$$

$$\begin{array}{r} - \frac{3}{9} \\ \hline \end{array}$$
 7. $8 + 15 + N = 33$ $N =$ _____
 8. Write an equivalent fraction for $\frac{2}{3}$.
Use 3 as the multiplier.
 9. Write in digits: forty-thousand, six hundred ten.
 10. There are eleven marbles in the bag. Two are green, three are red and the remainder are white. Express the number of white marbles as a fraction.

1. _____
2. _____
- 3a. _____
- b. _____
4. _____
5. _____
- 6a. _____
- b. _____
7. _____
8. _____
9. _____
10. _____

403



1. Round to the nearest thousand. 5,568 1. _____
2. Round the numbers to the nearest thousand. $7,432 = \underline{\hspace{2cm}}$ 2. _____
 Find the *estimated* answer. $\quad \quad \quad - 3,869 = \underline{\hspace{2cm}}$
3. If a number is multiplied by zero the answer is always _____. 3. _____
4. Find the product of 3 and 5. 4. _____
5. Fill in the missing numbers in this sequence. 5. _____
 $\frac{3}{8}, \frac{4}{8}, \frac{5}{8}, \frac{\quad}{8}, \frac{\quad}{8}, \frac{8}{8}$
6. $\frac{7}{5}$ is ($>$, $<$) 1. 6. _____
7. $\frac{3}{4}$ ($=$, \neq) $\frac{12}{16}$ 7. _____
8. Write in digits: 8. _____
 five hundred twenty thousand, six hundred eighty-five
9. What digit is in the ten thousands' place? 856,349 9. _____
10. Solve. 10a. _____

	a. $\begin{array}{r} 642 \\ \times 5 \\ \hline \end{array}$	b. $\begin{array}{r} 391 \\ \times 6 \\ \hline \end{array}$
--	---	---

404



1. Round to the thousands' place. 6,785 1. _____
2. Select the solid shapes. 2. _____
 a. sphere b. oval c. octagon d. cone e. diamond f. pyramid
3. How many dimensions does a plane shape have? (1, 2, 3, 4) 3. _____
4. A polygon must have at least (1, 2, 3, 4) sides. 4. _____
5. A ray has (1, 2, 3, 4) endpoints. 5. _____
6. A circle is a continuous (a. ray b. line c. line segment). 6. _____
7. If a rectangle has measurement of 3 feet by 2 feet, the length 7a. _____
 is a. _____ feet and the width is b. _____ feet. b. _____
8. In a class of students, twenty-six are going to camp and fourteen 8. _____
 are not. Express as a fraction the number of students from the
 whole class who are not going to camp.
9. Bob started a new box of cereal on Monday. By Friday, he had 9. _____
 eaten $\frac{5}{8}$ of the box. How much of the cereal was left by Friday?
10. $N - 184 = 359$ $N = \underline{\hspace{2cm}}$ 10. _____

405



Write the family of facts for

1. 5, 6, and 11.
2. 7, 8, and 56.
3. Write the equivalent.
 - a. 1 foot = __ inches
 - b. 1 pint = __ cups
 - c. 1 gallon = __ quarts

A rectangle has the measurement of 5 feet by 6 feet.

4. What is the perimeter?
5. What is the area?
6. Write the equivalent in Arabic or Roman numerals.
 - a. LVII
 - b. 1,326
7. $(8 \times 5) - 4 = N$ What does N equal?
8. $15 + 9 + 12 + N = 45$. What does N equal?
9. Solve.

a. 3,672	b. 7,693
$\begin{array}{r} \times 4 \\ \hline \end{array}$	$\begin{array}{r} \times 7 \\ \hline \end{array}$
10. Solve.

a. $7 \overline{)56}$	b. $8 \overline{)40}$	c. $63 \div 7 =$	d. $48 \div 6 =$
-----------------------	-----------------------	------------------	------------------

1. _____
- _____
- _____
2. _____
- _____
- _____
- 3a. _____
- b. _____
- c. _____
4. _____
5. _____
- 6a. _____
- b. _____
7. _____
8. _____
- 9a. _____
- b. _____
- 10a. _____
- b. _____
- c. _____
- d. _____

406



1. Write the prime numbers between 0 and 10.
2. What are the factors of 8?
3. List the first 4 multiples of 5. Begin with 5.
4. $\frac{8}{7}$ is a (a. proper b. improper) fraction.
5. Change $\frac{6}{18}$ to an equivalent fraction by dividing numerator and denominator by the same number.
6. Write the missing numbers. $2 \frac{1}{3}, \underline{\hspace{1cm}}, 3, \underline{\hspace{1cm}}, 3 \frac{2}{3}$
7. Solve.

a. $4 \frac{2}{5}$	b. $11 \frac{5}{9}$
$\begin{array}{r} + 7 \frac{1}{5} \\ \hline \end{array}$	$\begin{array}{r} - 6 \frac{3}{9} \\ \hline \end{array}$
8. What is the perimeter of a triangle with sides equal to 5 inches?
9. How many angles in a square?
10. Solve with a remainder. a. $5 \overline{)38}$ b. $4 \overline{)21}$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
- 7a. _____
- b. _____
8. _____
9. _____
- 10a. _____
- b. _____

407



Solve.


1. a. $\begin{array}{r} 43 \\ \times 25 \\ \hline \end{array}$ b. $\begin{array}{r} 693 \\ \times 48 \\ \hline \end{array}$

Simplify.

2. a. $\frac{3}{12}$ b. $\frac{24}{5}$

Add or subtract and simplify.

3. a. $\begin{array}{r} \frac{7}{8} \\ + \frac{5}{8} \\ \hline \end{array}$ b. $\begin{array}{r} \frac{4}{15} \\ + \frac{6}{15} \\ \hline \end{array}$ 4. a. $\begin{array}{r} \frac{11}{12} \\ - \frac{5}{12} \\ \hline \end{array}$ b. $\begin{array}{r} \frac{20}{21} \\ - \frac{13}{21} \\ \hline \end{array}$

5. Identify as (a. line b. angle c. ray). 
6. A rectangle measures: length 5 ft. width 3 ft.
Find the a. perimeter _____ b. area _____
7. Find the average of 5, 7, 9, 12, and 12.
8. Solve. What is seventy-four dollars and two cents minus thirty dollars and ten cents?
9. Find the missing number. $N = (12 \times 6) - 42$.
10. Prove by cross multiplication that $\frac{3}{8} = \frac{9}{24}$.

- 1a. _____
b. _____
- 2a. _____ b. _____
- 3a. _____ b. _____
- 4a. _____ b. _____
5. _____
- 6a. _____
b. _____
7. _____
8. _____
9. _____
10. _____

408



1. $N = 369 \div (4 + 2 + 3)$ $N =$ _____

2. a. $\begin{array}{r} 4,863 \\ \times 24 \\ \hline \end{array}$ b. $\begin{array}{r} 2,763 \\ \times 24 \\ \hline \end{array}$ 3. a. $\begin{array}{r} 4 \overline{)923} \\ \hline \end{array}$ b. $\begin{array}{r} 9 \overline{)279} \\ \hline \end{array}$

4. What is the smallest multiple that 3 and 6 have in common?
5. Find the equivalent fractions.
a. $\frac{3}{5} = \frac{\quad}{10}$ b. $\frac{4}{5} = \frac{\quad}{20}$
6. Solve and simplify. 7.
- a. $\begin{array}{r} \frac{3}{5} \\ + \frac{7}{10} \\ \hline \end{array}$ b. $\begin{array}{r} \frac{6}{16} \\ + \frac{3}{8} \\ \hline \end{array}$ a. $\begin{array}{r} \frac{11}{15} \\ - \frac{2}{5} \\ \hline \end{array}$ b. $\begin{array}{r} \frac{14}{18} \\ - \frac{1}{3} \\ \hline \end{array}$
8. What number is the metric system based on?
9. A centimeter is (<, >) a meter.
10. The freezing temperature is _____ degrees Fahrenheit.

1. _____
- 2a. _____
b. _____
- 3a. _____
b. _____
4. _____
- 5a. _____ b. _____
- 6a. _____ b. _____
- 7a. _____ b. _____
8. _____
9. _____
10. _____

409



- | | | | | | |
|---|--|------------------------|-----------|------------|----------|
| 1. Write the equivalent fraction. | a. .04 | b. .903 | 1a. _____ | b. _____ | |
| 2. Write the equivalent decimal. | a. $\frac{3}{100}$ | b. $\frac{425}{1,000}$ | 2a. _____ | b. _____ | |
| 3. Write in words. | a. .63 | b. 2.4 | 3a. _____ | b. _____ | |
| 4. Find the average. | 8, 3, 7, 6 | | b. _____ | _____ | |
| 5. $3.7 + .42 + 8.72 =$ | | | 4. _____ | _____ | |
| 6. $6.032 - .73 =$ | | | 5. _____ | _____ | |
| 7. $4\frac{3}{8}$ | 8. $9\frac{5}{12}$ | | | 7. _____ | |
| $+ 7\frac{2}{5}$ | $- 2\frac{3}{8}$ | | | 8. _____ | |
| 9. a. $\frac{3}{4} + \frac{1}{8} =$ _____ | b. $\frac{1}{2} + \frac{5}{6} =$ _____ | | | 9a. _____ | b. _____ |
| 10. a. $17 + 5 (=, \neq) 2 \times 11$ | b. $\frac{5}{8} (<, >) \frac{7}{10}$ | | | 10a. _____ | b. _____ |

410



- Match.**
- | | | |
|--|------------------|-----------|
| 1. A selection from which every member has an equal chance of being chosen | a. estimation | 1. _____ |
| 2. Represents the whole of its parts | b. circle graph | 2. _____ |
| 3. Connects data with lines | c. problem | 3. _____ |
| 4. A question for which a solution must be found | d. random sample | 4. _____ |
| 5. An opinion of the amount or value of something | e. bar graph | 5. _____ |
| 6. Illustrated data using wide lines | f. prediction | 6. _____ |
| 7. A list of facts from which a conclusion may be drawn | g. picture graph | 7. _____ |
| 8. Uses illustrations | h. data | 8. _____ |
| 9. To tell something in advance | i. line graph | 9. _____ |
| 10. Dividing the whole number by the number being counted | j. average | 10. _____ |

LIFEPAC[®]

MATH

Diagnostic Test Answer Keys

1 0 0 - 8 0 0


101

1. 50, 51

2. 85, 86

3. 93, 62

4. 25, 43

5. 

6. 8, 6, 7, 8

7. 4, 6, 5, 3

8. 2, 6, 14, 15, 18

9. 2

10. 

102

1. 10, 10, 9, 7


2. 7, 10, 3

3. 2, 5, 1, 7

4. 14, 10, 19, 16

5. 2, 8, 6

6. four, eight
three, seven

7. b. 

8. 1(10), 2

9. 321

10. 1 2 3 ④ 5 6

103

1. +

2. ≠

3. minus

4. is not equal to

5. nine

6. 3 bugs

7. 5:00

8. 7

9. 10, 9, 7, 3

10. 67, 68, 69, 70, 71

104

1. 4, 8, 10

2. 20, 50, 60

3. 2, 4, 6, 8, 10

4. 13, 84

5. 70, 5

6. a, c, b

7. 

8. 5, 7


9. 13, 13, 11, 15

10. =

105

1. 10, 10, 12, 11

2. 3, 6

3. 

4. 

5. 

6. 2:30

7. seventeen, nineteen,
fifteen, thirteen

8. 8

9. 2, 3

10. 12

106

1. 4, 7, 2, 1

2. 12, 12, 10, 10

3. 7 - 5 = 2

4. Four plus six
equals ten

5. 10, 20, 25

6. <, >

7. 6, 1, 4

8. 10:15

9. 63, 95, 87

10. 11

107

1. 143, 192

2. 104, 160

3. PM

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

5. 72, 27

6. >

7. 5, 3, 8, 7

8. ≠

9. 100, 30, 8

10. 10, 20

108

1. 8, 9, 8, 9

2. 3:50

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

4. fifty-six

5. three-fourths

6. 30

7. 165

8. 

9. 154, 155, 157

10. Thursday

109

1. $\frac{4 + 8 = 12}{8 + 4 = 12}$

2. $\frac{12 - 4 = 8}{12 - 8 = 4}$

3. 7, 8, 25, 81

4. 14, 89

5. 50

6. 7

7. $\frac{3}{8}$

8. F

9. July

10. 44¢

110

1. 0, 2, 4, 6, 8

2. 

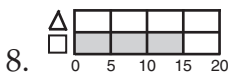
3. 89, 37

4. 8, 74, 44, 42

5. 15 - 8 = 7

6. 18, 49

7. 12, 33



9. 

10. five

201

1. thirteen
forty-five

2. $\frac{13}{14}$
 $\frac{5}{9}$

3. $\frac{98}{77}$
 $\frac{42}{53}$

4. $\frac{3}{9}$

5. $\frac{16}{18}$
 $\frac{58}{60}$

6. $\frac{4 + 7 = 11}{7 + 4 = 11}$

$\frac{11 - 4 = 7}{11 - 7 = 4}$

7a. - b. -

c. ≠ d. <

8. 7 dimes

9. $\frac{15 - 6 \neq 8}{74 > 62}$

10. d

202

1. $\frac{138}{140}$
 $\frac{142}{143}$

2. $\frac{19}{57}$
 $\frac{8}{7}$

3. even

4. $\frac{0}{5}$

5. 60

6. 2:50

7. $\frac{33}{59}$

8. 4 cookies

9. $\frac{7}{1}$
1

10. $\frac{3}{5}$

203

1. $\frac{7}{11}$

2a. $\frac{1}{3}$
5

b. $\frac{100}{30}$
5

3. $\frac{84}{74}$

4. $\frac{97¢}{\$4.24}$

5. inches

6. $\frac{3}{3}$
1 / 3

7. 40 / 10

8a. 104

b. one hundred
fifty-three

9. 4 oranges

10. > / ≠

204

1. $\frac{500}{501}$

2a. 719

b. six hundred
one

3a. $\frac{8}{0}$

b. 4
 $\frac{800}{0}$
4

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

1 / 4

5. $\frac{948}{72}$

6. $\frac{42}{211}$

7. $\frac{12}{3}$

8. a / d

9. $\frac{60}{90}$

10. 2 pennies

205

1. > / =

2. 4

3. 3, 6, 9, 12

4a. 953 b. 359

5. $\frac{3}{5}$ / $\frac{7}{8}$

6. 35° F

7. 565 / 572

8. 30 / 331

9. 12

10. fifteenth

206

1. 8:52

2. $\frac{5}{7}$ / $\frac{2}{12}$

3. 586 / 562

4. 34 / 25

5. 3 inches

6a. $\frac{9}{3}$

b. 2
 $\frac{900}{30}$
2

7. \$3.45

8. 36 / 16

9. $\frac{356}{365}$
 $\frac{536}{563}$

10. circle

207

- two-sevenths
- $\frac{76}{885} / \frac{498}{615}$
- $\frac{41}{38} / \frac{322}{59}$
- subtract 2
- May / June
July / Aug.
- 60
- 24 / 7
- $\frac{3}{4} / \frac{4}{12}$
- $\frac{0}{4} / \frac{2}{6}$
8
- 74°

208

- 3 + 3 = 6
- 10 / 14
- / -
- $\frac{3}{0} / \frac{1}{2}$
- fifth
- 12 inches
- 3
- east
- 2 / 4
- $\frac{\$6.84}{820} / \frac{912}{24}$

209

- 2 in / 1 in
- 6 in / 2 sq in
- 3 / 6
- 2½ in
- a. $\frac{5}{7} / 904$
b. four-ninths
three hundred
seventy-eight
- 52
- < / =
- odd
- $\frac{107}{660} / \frac{625}{\frac{5}{7}}$
- $\frac{37}{223} / \frac{206}{\frac{2}{15}}$

210

- 600 / 800
- 1 quart
- odd
- a. \$5.13
b. eight dollars
and six cents
- $\frac{700}{4} / 50$
- 8:16 PM
- $\frac{5}{6}$
- a. - / = or = / +
b. + / =
- $\frac{4}{7}$
- $\frac{816}{235} / \frac{\$7.75}{\$2.13}$

301

- 0-9 (any two)
- 905
- $\frac{14, 62, 291, 315, 351, 845}{}$
- 700
- 14 / 3
- $\frac{652}{532} / \frac{465}{321}$
- 12 / 3
- $\frac{17 - 8 \neq 6}{4 + 5 > 12 - 7}$
- fourth
- 23 pennies

302

- 10 / even
- $\frac{832}{36} / \frac{427}{38}$
- 300 / 0
- 54
- 0 / 5
- b.
- > / ≠
- rectangle
- 62¢ / \$.62
- 16 cookies

303

- $\frac{6+0=6 / 0+6=6}{6-0=6 / 6-6=0}$
- seven hundred
nine
- $\frac{879}{461} / \frac{843}{317}$
- $\frac{16}{2} / \frac{2,000}{4}$
- 863 / 368
- 8 + 7 = 15
- $\frac{3}{5} / \frac{8}{9}$
- $\frac{4}{6} / \frac{6}{6}$
- midnight
- 1½ inches

304

- thousands
- $\frac{825}{286} / \frac{58}{667}$
- 70
- 1¼ inches
- $\frac{2}{16} / \frac{12}{36}$
- five thousand,
eight hundred
six
- 4 D, 2 qtrs
2 d, 3 pen
- 26
- cube
cone
- four-sixths

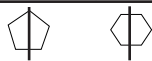
305

1. $\frac{\frac{7}{8}}{\frac{6}{9}} / \frac{\frac{9}{12}}{\frac{3}{5}}$

2. $\frac{32}{212}$

3. $\frac{3 \text{ cookies}}{\quad}$

4. $\frac{700}{\quad}$

5. $\frac{12 \text{ inches}}{\quad}$ 6. $\frac{\text{pentagon}}{\text{hexagon}}$ 7. $\frac{\text{odd}}{\quad}$

8. $\frac{14}{\quad}$

9. $\frac{15}{\quad}$

10. $\frac{\text{June 14}}{\quad}$ **306**

1. $\frac{7,823 / 7,642}{369 / 2,116}$

2. $\frac{2, 4, 6, 8, 10,}{12, 14, 16, 18, 20}$

3. $\frac{60 / 144}{365 / 9}$

4. $\frac{8 \text{ linear feet}}{4 \text{ square feet}}$

5. $\frac{\frac{5}{7}}{\frac{4}{9}}$

6. $\frac{\$2.77}{\$7.05}$

7. $\frac{8 + 6 \neq 5 + 7}{\quad}$

8. $\frac{20 \text{ cars}}{\quad}$

9. $\frac{b}{a}$

10. $\frac{\$1.86}{\quad}$

307

1. $\frac{12 / 15}{18 / 25}$

2. $\frac{\text{four-sevenths}}{\text{three and two-eighths}}$

3. $\frac{2,736 / 2,618}{4,429 / 4,683}$

4. $\frac{10 \text{ linear inches}}{4 \text{ square inches}}$

5. $\frac{7\frac{5}{7}}{6\frac{4}{6}}$

6. $\frac{\text{LIX}}{\quad}$ 7. $\frac{3 \text{ out of } 8}{\quad}$

8. $\frac{85}{85}$

9. $\frac{32\text{¢}}{\quad}$

10. $\frac{4,132}{\quad}$

3081. $\frac{\text{faces}}{\text{angles}}$

2. $\frac{12}{8}$

3. $\frac{34}{174}$

4. $\frac{\frac{4}{10}}{\quad}$

5. $\frac{4,706}{2,008}$

6. $\frac{7\frac{7}{9}}{8}$

7. $\frac{3,362}{3,154}$

8. $\frac{14 / 30}{24 / 40}$

9. $\frac{6}{\quad}$

10. $\frac{85}{\quad}$

309

1. $\frac{\frac{2}{9}}{7\frac{3}{8}}$

2. $\frac{\text{yes}}{\quad}$

3. $\frac{7,022}{3,669}$

4. $\frac{=}{<}$

5. $\frac{32}{0}$

6. $\frac{\text{pyramid}}{\text{hexagon}}$

7. $\frac{18 / 32}{50 / 18}$

8. $\frac{7,000}{9,000}$

9. $\frac{\text{DXXXVII}}{\quad}$ 10. $\frac{80 \text{ minutes}}{\quad}$ **310**

1. $\frac{8,000}{\quad}$

2. $\frac{1,316 / 9,276}{6,462 / 3,994}$

3. $\frac{4, 8, 12, 16, 20,}{24, 28, 32, 36, 40}$

4. $\frac{\frac{7}{9}}{\frac{\frac{3}{8}}{2\frac{4}{7}}}$

5. $\frac{30 / 12}{28 / 30}$

6. $\frac{12 \text{ linear feet}}{5 \text{ square feet}}$ 7. $\frac{4 \text{ out of } 10}{\quad}$

8. $\frac{10}{\quad}$

9. $\frac{15 - 8 = 7}{\quad}$

10. $\frac{\frac{5}{8} \text{ glass}}{\quad}$ **401**

1. $\frac{1, 2, 3, 4}{4,056}$

3a. $\frac{2}{8}$

b. $\frac{8}{6}$

c. $\frac{6}{9}$

4. $\frac{9}{\$70.04}$

5. $\frac{\$70.04}{8,000 \text{ or } 8 \times 1,000}$

6. $\frac{000 \text{ or } 0 \times 100}{50 \text{ or } 5 \times 10}$

7. $\frac{9 \text{ or } 9 \times 1}{\text{sixth}}$

8. $\frac{4}{9}$

9. $\frac{11}{12}$

10a. $\frac{20}{24}$

b. $\frac{24}{18}$

c. $\frac{18}{\quad}$

402

1. $\frac{>}{\quad}$

2. $\frac{\neq}{\quad}$

3a. $\frac{90}{240}$

b. $\frac{240}{500}$

4. $\frac{500}{1,809}$

5. $\frac{1,809}{\quad}$

6a. $\frac{1}{9}$

7. $\frac{10}{\quad}$

8. $\frac{6}{9}$

9. $\frac{40, 610}{\quad}$

10. $\frac{6}{11}$

403

1. 6,000
2. 3,000
3. 0
4. 15
5. 6, 7
6. >
7. =
8. 520,685
9. 5
- 10a. 3,210 b. 2,346

404

1. 7,000
2. a, d, f
3. 2
4. 3
5. 1
6. b
- 7a. 3
- b. 2
8. $\frac{14}{40}$
9. $\frac{3}{8}$
10. 543

405

1. $5 + 6 = 11$
 $6 + 5 = 11$
 $11 - 6 = 5$
 $11 - 5 = 6$
2. $7 \times 8 = 56$
 $8 \times 7 = 56$
 $56 \div 8 = 7$
 $56 \div 7 = 8$
- 3a. 12
- b. 2
- c. 4
4. 22 ft.
5. 30 sq. ft.
- 6a. 57
- b. MCCCXXVI
7. 36
8. 9
- 9a. 14,688
- b. 53,851
- 10a. 8
- b. 5
- c. 9
- d. 8

406

1. 1, 2, 3, 5, 7
2. 1, 2, 4, 8
3. 5, 10, 15, 20
4. b
5. $\frac{1}{3}$ or $\frac{2}{6}$ or $\frac{3}{9}$
6. $2\frac{2}{3}$, $3\frac{1}{3}$
- 7a. $11\frac{3}{5}$
- b. $5\frac{2}{9}$
8. 15 in.
9. 4
- 10a. 7 R3 b. 5 R1

407

- 1a. 1,075
- b. 33,264
- 2a. $\frac{1}{4}$ b. $4\frac{4}{5}$
- 3a. $1\frac{1}{2}$ b. $\frac{2}{3}$
- 4a. $\frac{1}{2}$ b. $\frac{1}{3}$
5. c
- 6a. 16 ft.
- b. 15 sq. ft.
7. 9
8. \$43.92
9. 30
10. $3 \times 24 = 72$
 $9 \times 8 = 72$

408

1. 41
- 2a. 116,712
- b. 66,312
- 3a. 230 R3
- b. 31
4. 6
- 5a. 6 b. 16
- 6a. $1\frac{3}{10}$ b. $\frac{3}{4}$
- 7a. $\frac{1}{3}$ b. $\frac{4}{9}$
8. 10
9. <
10. 32°

409

- 1a. $\frac{4}{100}$ b. $\frac{903}{1,000}$
- 2a. .03
- b. .425
- 3a. sixty-three
hundredths
- b. two and four
tenths
4. 6
5. 12.84
6. 5.302
7. $11\frac{31}{40}$
8. $7\frac{1}{24}$
- 9a. $\frac{7}{8}$ b. $1\frac{1}{3}$
- 10a. = b. <

410

1. d
2. b
3. i
4. c
5. a
6. e
7. h
8. g
9. f
10. j

- 501**
- a
 - ten thousands
 - 18
 - 53
 - b
 - 6a. $\frac{5}{7}$ b. $\frac{7}{16}$
 - <
 - 600,059
 - 400
 - 5,000

- 502**
- 28,743
 - 425
 - 8,000
 - b
 - 5a. 1 b. $\frac{1}{2}$ or $\frac{12}{24}$
 - 6a. $\frac{4}{6}$ b. $3\frac{1}{3}$
 - c
 - d
 - ≠
 - 10a. 30
b. 8

- 503**
1. $\frac{18}{9}$, $9\overline{)18}$
or $18 \div 9$
 - 548,400
 - 3a. $\frac{2}{3}$ b. $1\frac{3}{5}$
 - 12
 - 5a. $12\frac{1}{2}$ b. $3\frac{1}{2}$
 - 6a. $12\frac{1}{6}$ b. $5\frac{1}{8}$
 - 24
 - =
 - 10 in.
 - 4 sq. in.

- 504**
- d
 - a
 - e
 - b
 - f
 - 6a. 6.02
b. forty-five thousandths
 - 7a. 38.64
b. 23.85
 - 8a. MDXX
b. CCLXXIX
 - ten million
 - ≠

- 505**
- 1a. 350
b. 42,500
 - 271,145
 - $5\frac{1}{2}$ or $5\frac{2}{4}$
 - 4a. 3
b. 16
c. 2
 - 21 yd. 3 in.
 - 20 gal. 3 qt.
 - $\frac{9}{9}$
 - 8a. $2L + 2W$
b. $L \times W$
 - 180 mi.
 - 40°

- 506**
- 72 cu. ft.
 - 8 ft.
 - 3a. $3\frac{1}{3}$
b. $2\frac{9}{10}$
 - 8
 - 5a. $\frac{1}{3}$ b. $\frac{5}{8}$
 - thousandths
 - 13.25
 - 6.12
 - 2.08
 - 355.5

- 507**
- 7 R30
2. 20 R18
 - 3a. 15.05
b. 2.95
 - 4a. .02193
b. 1.44
 - 397,120
 - $1\frac{5}{8}$
 - <
 - 8a. 10
b. $5\frac{3}{5}$
 - 9a. 4
b. 49
 - 54

- 508**
- 1a. 395
b. 22.05
 - 2a. 76.807
b. 41
3. b
 - 31.4 in.
 - 15 sq. in.
 - 6a. 100
b. 1,000
 - 2.34
 - 2, 2, 3 or 2^2 , 3
 - 8 R9
 - 12 R4

509
1a. $\frac{9}{5}$ b. $\frac{1}{7}$

2a. $\frac{1}{72}$ b. $\frac{1}{36}$

3a. $\frac{4}{21}$ b. 3

4a. $\frac{34.5}{560}$

5a. 2.2 b. .026

6a. $\frac{3, 1}{1, 2}$

7. $\frac{54 \text{ mph}}{1:4}$

8a. $\frac{.25}{52}$

9a. $\frac{52}{100}$ b. 52%

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

510
1. $\frac{d}{a}$

2. $\frac{a}{f}$

3. $\frac{f}{c}$

4. $\frac{c}{e}$

5. $\frac{e}{b}$

6. $\frac{b}{4:10}$

7. $\frac{4:10}{40\%}$

8. $\frac{40\%}{218}$

9. $\frac{218}{72}$

10a. $\frac{72}{42}$

601
1. $\frac{\text{one billions}}{3,000}$

2. $\frac{3,000}{=}$ b. $\frac{>}{}$

3a. $\frac{=}{63}$ b. $\frac{>}{12}$

4a. $\frac{63}{3,645}$ b. $\frac{12}{417,952}$

5. $\frac{3,645}{41 \text{ R}15}$

6a. $\frac{417,952}{48}$

7. $\frac{48}{.09, .46}$

8. $\frac{.09, .46}{.637, .8}$

9. $\frac{c}{\frac{4}{5} \text{ b. } 1\frac{3}{4}}$

10a. $\frac{\frac{4}{5} \text{ b. } 1\frac{3}{4}}{91}$

602
1. $\frac{91}{E \text{ b. } O}$

2a. $\frac{E \text{ b. } O}{O \text{ d. } E}$

3a. $\frac{\frac{3}{4} \text{ b. } \frac{1}{4}}{\frac{7}{12}, \frac{2}{3}, \frac{3}{4}, \frac{5}{6}}$

4. $\frac{\frac{7}{12}, \frac{2}{3}, \frac{3}{4}, \frac{5}{6}}{8\frac{1}{8} \text{ b. } 2\frac{1}{2}}$

5a. $\frac{8\frac{1}{8} \text{ b. } 2\frac{1}{2}}{b}$

6. $\frac{b}{19.43}$

7a. $\frac{19.43}{.454}$

8a. $\frac{.108}{2.242}$

9. $\frac{2.242}{3, 3, 5 \text{ or } 3^2, 5}$

10. $\frac{3, 3, 5 \text{ or } 3^2, 5}{2^2 \times 3^3}$

603
1. $\frac{181}{6 \text{ b. } 35}$

2a. $\frac{6 \text{ b. } 35}{29}$

3a. $\frac{29}{.4}$

4. $\frac{.375}{560}$

5a. $\frac{560}{.783}$

6a. $\frac{3.39}{3.6\frac{5}{8} \text{ or } 3.6625}$

7. $\frac{5, 6, 7, 8}{12}$

8. $\frac{12}{c}$

9. $\frac{c}{a, c}$

10. $\frac{a, c}{8.16}$

604
1a. $\frac{8.16}{25.2}$

b. $\frac{25.2}{b}$

2. $\frac{b}{8}$

3. $\frac{8}{\frac{3}{15} \text{ b. } \frac{1}{20}}$

4a. $\frac{\frac{3}{15} \text{ b. } \frac{1}{20}}{4\frac{1}{5} \text{ b. } 2\frac{1}{3}}$

5a. $\frac{4\frac{1}{5} \text{ b. } 2\frac{1}{3}}{108 \text{ b. } 27}$

6a. $\frac{108 \text{ b. } 27}{30 \text{ ft.}}$

7a. $\frac{30 \text{ ft.}}{54 \text{ sq. ft.}}$

8. $\frac{54 \text{ sq. ft.}}{a}$

9. $\frac{a}{65^\circ}$

10a. $\frac{30,000}{200}$

b. $\frac{200}{}$

605
1a. $\frac{3,000,000,000}{3 \times 10^9}$

b. $\frac{3 \times 10^9}{= \text{ b. } =}$

2a. $\frac{= \text{ b. } =}{74}$

3a. $\frac{74}{\text{MDCCL}}$

b. $\frac{\text{MDCCL}}{c}$

4. $\frac{c}{e}$

5. $\frac{e}{a}$

6. $\frac{a}{26 \text{ in.}}$

7a. $\frac{26 \text{ in.}}{32 \text{ sq. in.}}$

b. $\frac{32 \text{ sq. in.}}{a}$

8. $\frac{a}{b}$

9. $\frac{b}{b}$

10. $\frac{b}{}$

606
1a. $\frac{y \text{ b. } y}{y \text{ d. } y}$

c. $\frac{y \text{ d. } y}{4}$

2. $\frac{4}{12 - 5 = 7 \text{ or } 12 - 7 = 5}$

3. $\frac{12 - 5 = 7 \text{ or } 12 - 7 = 5}{D \text{ b. } M}$

4a. $\frac{D \text{ b. } M}{31.4 \text{ in.}}$

5a. $\frac{31.4 \text{ in.}}{78.5 \text{ sq. in.}}$

b. $\frac{78.5 \text{ sq. in.}}{34\%}$

6a. $\frac{34\%}{6\%}$

b. $\frac{6\%}{.8}$

7a. $\frac{.8}{80\%}$

b. $\frac{80\%}{16}$

8. $\frac{16}{3}$

9. $\frac{3}{6 \text{ hr.}}$

10. $\frac{6 \text{ hr.}}{}$

607

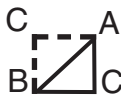
1. $5(4 + 8) = 60$
2. $15 + 15 + 15 = 45$
- 3a. 3.75
- b. $3\frac{3}{4}$
4. a
5. -2, -1, 0, 1, 2
- 6a. -7 b. -1
- 7a. 24 b. 6
8. 54 m^2
9. 42 in.^2
- 10a. 81 b. 3

608

1. f
2. c
3. d
4. b
5. 6:18 or 1:3
6. 15
- 7a. 3570 b. .02
8. 12
9. 6.015
- 10a. 96 b. 8

609

- 1a. 0 b. 1
- 2a. $\frac{2, 2, 5}{2}$ b. 2
- c. $\frac{2^2, 5}{2}$
3. 58,600,000,000
4. 100
5. $16 \geq 16, 14, 12 > 10$



6. 15 in.
7. 15 in.
8. 6 in.
- 9a. 5 b. 15

610

- 1a. 1,210
- b. 6.72
- 2a. 1.91
- b. $136\frac{4}{7}$
3. 5,600
- 4a. 42
- b. 51
- 5a. $\frac{37}{60}$ b. $4\frac{17}{24}$
- 6a. 55 b. $3\frac{3}{8}$
- 7a. 900
- b. 1200
8. 13, 14, 15
- 9a. 2,721,000
- b. 736,400
10. 94 sq. ft.

701

1. 405,306
- 2a. >
- b. =
- c. <
3. 27
4. 44
5. 9
6. 11
7. 9,566
8. 1,918
9. 700
10. 2,000

702

- 1a. 7
- b. 67
- c. 469
- 2a. 75
- b. 15
- c. 5
3. 27
4. 64
5. 5,400,000,000
6. 5,372
7. 68,096
8. 27 R12
9. 607 R6
10. 36

703

1. line segment
2. c
3. 17
4. right
5. c
6. 360°
7. 6 in.
8. 18.84 in.
9. 288 sq. ft.
10. 720°

704

1. $\frac{30}{54}$
2. $6\frac{3}{7}$
3. >
4. 2.2
5. .034%
6. 9:34
7. $\frac{16}{25}$
8. .0013
9. .875
10. 5,000 mg

705

1. {5, 7, 9, 11}
2. b
3. a
4. 114
5. 8
6. 7×10^6
7. 8
8. 140
9. 2^4
10. b

706

- 1a. $1 \frac{5}{8}$ b. $15 \frac{7}{9}$
- 2a. $\frac{17}{45}$ b. $1 \frac{5}{6}$
3. 26.623
4. 1.02
5. $\frac{7}{100}$
6. $\frac{51}{200}$
7. .43
8. $\frac{a}{c}$
d
9. $7 \frac{1}{4}$ min.
10. .3 hr. or
18 min.

707

- 1a. $\frac{8}{15}$ b. $73 \frac{1}{2}$
- 2a. $1 \frac{1}{2}$ b. $\frac{2}{15}$
- 3a. 6 b. $\frac{7}{8}$
- 4a. 1.785
b. 309.024
- 5a. 35.5
b. 19.875
- 6a. 345.1
b. .00739
7. 7
8. 40
9. 25%
10. \$284.38

708

1. 3 ft.
2. 20 in.
3. \$63
4. c
5. 1:5
6. $\frac{4}{9} = \frac{12}{27}$
7. b
8. 500 mph
9. 28 in.
10. 27

709

1. c
2. 9
3. 8
4. 8
5. 22
6. (-2, 5)
7. (4, 3)
8. (-6, -4)
9. 1
10. 22

710

1. 8×10^4
2. >
3. a
4. 16
5. 56.52 in.
- 6a. $\frac{7}{9}$ b. $2 \frac{2}{3}$
- 7a. $\frac{1}{6}$ b. 2
8. 6
9. Distance
equals rate
times time
10. 44%

801

1. 2,005,206
2. hundred
thousand
3. 4
4. 490,000
5. 24 fish
6. 75
7. 58 ft.
8. 68 in.
9. 37 in.
10. 1,764 m²

802

1. 1,614
2. c
3. 5^4
4. a
5. 17, 19, 23
6. $2^2, 3^2$
7. 6
8. 120
9. $\frac{5}{6}$
10. $\frac{4}{5}$

- 803**
- $\frac{3}{4}$
 - $\frac{12}{42}$
 - $1\frac{4}{7}$
 - 18:72
 - $\frac{1}{8}, \frac{1}{2}, \frac{7}{12}$
 $\frac{5}{6}, 1\frac{2}{3}, \frac{17}{8}$
 - .2
 - $\frac{71}{100}$
 - 40 ft.
 - b
 - 10%

- 804**
- $1\frac{1}{6}$
 - $618\frac{14}{15}$
 - $\frac{8}{35}$
 - $1\frac{13}{20}$
 - 779.864
 - 3.968
 - 3.1056
 - 72,050
 - $\frac{10}{5}$
 - .6

- 805**
- $\frac{4}{5}$
 - $58\frac{1}{2}$
 - 10.4384
 - 80.4
 - $\frac{5}{6}$
 - $1\frac{23}{26}$
 - \$3,000
 - 3.6
 - 64
 - 17.5%

- 806**
- 32
 - 28
 - 41
 - 4 in 14
 - 3:10
 - 5:10
 - 200
 - 5, 8, 11
 - (-5, -2)
 - 2:5

- 807**
- b
 - $\frac{-15, -8, -6}{0, 2, 5, 10}$
 - 32
 - 15
 - 13
 - 0
 - 27
 - a. (-1, 6)
b. (2, -3)
 - 19
 - 3

- 808**
- 30 sq. ft.
 - 120 m²
 - 25.748 cm
 - 19.625 sq. ft.
 - 9 cu. ft.
 - c
 - c
 - 10 yds.³
 - c
 - a

- 809**
- 82
 - $\frac{2}{3}$
 - $\frac{N}{3} + 6$
 - 3N - 5
 - $2\frac{1}{2}$
 - 1
 - xy + 2x
 - x = -3
 - c
 - 840 min. or
14 hr.

- 810**
- 160%
 - 16 b. 27
 - 206.0 cm²
 - 672 in.³
 - $\frac{xy - 4x + 3y}{-12}$
 - $4N + 2 = N - 1$
 - 6, 9, 0
 - 3, 4, 5, 6
 - 5×10^6
 - 6

501



1. Describe the number 345 in the problem $345 - 256 = 89$?
a. minuend b. quotient c. subtrahend d. product ?
2. What is the place value of the 5 in the number 452,673?
3. Select a composite number from 2, 5, 7, 18, 23.
4. What is the next number in the sequence 36, 39, 43, 46, 50,.... ?
5. $N + 12 = 39$. What operation do you use to solve for N?
a. add b. subtract c. multiply d. divide
6. a. $\frac{3}{7} + \frac{2}{7} =$ b. $\frac{10}{16} - \frac{3}{16} =$
7. Select the correct symbol. 689,348 (>, <) 689,438.
8. Write in digits. Six hundred thousand, fifty-nine.
9. Round to the hundreds' place. 413
10. Round to the nearest thousand.
Find the *estimated* answer. $9,526 - 5,329 =$

1. _____
2. _____
3. _____
4. _____
5. _____
- 6a. _____ b. _____
7. _____
8. _____
9. _____
10. _____

502



- Solve.
1.
$$\begin{array}{r} 429 \\ \times 67 \\ \hline \end{array}$$
 2.
$$7 \overline{)2975}$$
 3. Round to the thousands' place. 7,852
 4. $\frac{9}{5}$ is an example of a. a proper fraction
b. an improper fraction c. a mixed number
 5. a. $\frac{6}{9}$ b. $\frac{19}{24}$ 6. a. $2\frac{3}{7}$ b. $8\frac{2}{3}$

$$\begin{array}{r} \frac{6}{9} \\ + \frac{3}{9} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{19}{24} \\ - \frac{7}{24} \\ \hline \end{array}$$

$$\begin{array}{r} 2\frac{3}{7} \\ + 4\frac{1}{7} \\ \hline \end{array}$$

$$\begin{array}{r} 8\frac{2}{3} \\ - 5\frac{1}{3} \\ \hline \end{array}$$
 7. The distance between two intersecting rays is
a. a polygon b. a circle c. an angle d. a radius
 8. A closed plane figure with three or more sides is
a. a cube b. an angle c. a circle d. a polygon
 9. $\frac{5}{8}$ (=, \neq) $\frac{4}{5}$
 10. a. $(9 \times 4) - 6 =$ _____ b. $(\frac{28}{7}) \times 2 =$ _____

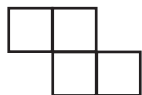
1. _____
2. _____
3. _____
4. _____
- 5a. _____ b. _____
- 6a. _____ b. _____
7. _____
8. _____
9. _____
- 10a. _____
b. _____

503



1. Show two ways eighteen divided by nine can be written in digits. 1. _____
2. Round to the hundreds' place. 548,371 2. _____
3. Reduce. a. $\frac{8}{12}$ b. $\frac{16}{10}$ 3a. _____ b. _____
4. What is the smallest common multiple of 4 and 6? 4. _____
5. Solve and simplify.

a. $9\frac{1}{6}$	b. $5\frac{11}{14}$	6. a. $7\frac{1}{2}$	b. $6\frac{7}{8}$	5a. _____ b. _____
<u>$+ 3\frac{2}{6}$</u>	<u>$- 2\frac{4}{14}$</u>	<u>$+ 4\frac{2}{3}$</u>	<u>$- 1\frac{3}{4}$</u>	6a. _____ b. _____
7. Find the average. 13, 18, 26, 39 7. _____
8. $(12 + 3) + 5$ (=, ≠) $12 + (3 + 5)$ 8. _____



= 1 square inch.

9. Find the perimeter. 9. _____
10. Find the area. 10. _____

504



- Select the correct answer (1 -5).
1. A triangle with no equal sides

	a. 90 degrees	
	b. congruent	1. _____
	c. 360 degrees	2. _____
	d. scalene	3. _____
	e. radius	4. _____
	f. parallel	5. _____
	g. diameter	6a. _____
	h. similar	b. _____
 2. A right angle
 3. The measurement from the center of the circle to the curve
 4. Two figures with the same size and shape
 5. Two lines always the same distance apart
 6. Write in digits or words.

a. six and two hundredths	b. .045	
---------------------------	---------	--
 7. Solve.

a. $3.4 + .24 + 35 =$	b. $73.2 - 49.35 =$	
-----------------------	---------------------	--
 8. Write the equivalent in Roman numerals.

a. 1,520	b. 279	
----------	--------	--
 9. Write the place of the underlined digit. 395,276,834

	7a. _____
	b. _____
	8a. _____
	b. _____
 10. $4 \times (3 \times 5)$ (=, ≠) $(4 \times 3) \times (5 \times 0)$

	9. _____
	10. _____

505



Solve.

1. a. $10 \times 35 =$

b. $100 \times 425 =$

2.
$$\begin{array}{r} 635 \\ \times 427 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 6\frac{1}{4} \\ -\frac{3}{4} \\ \hline \end{array}$$

4. a. 1 yd. = ____ ft. b. 1 lb. = ____ oz. c. 1 qt. = ____ pt.

Solve. Simplify your answer.

5.
$$\begin{array}{r} 16 \text{ yd. } 19 \text{ in.} \\ + 4 \text{ yd. } 20 \text{ in.} \\ \hline \end{array}$$

6.
$$\begin{array}{r} 26 \text{ gal. } 2 \text{ qt.} \\ - 5 \text{ gal. } 3 \text{ qt.} \\ \hline \end{array}$$

7. Write one (1) as a fraction with a denominator of 9.

8. Write the formula for a rectangle.

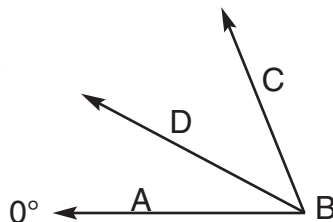
a. Perimeter = _____

b. Area = _____

9. Time = 4 hr. Rate = 45 mph Distance = _____

10. Write the measure of angle DBC.

$\angle ABC = 68^\circ$
 $\angle ABD = 28^\circ$



1a. _____

b. _____

2. _____

3. _____

4a. _____

b. _____

c. _____

5. _____

6. _____

7. _____

8a. _____

b. _____

9. _____

10. _____

506



1. Length = 4 ft. Width = 3 ft. Height = 6 ft. Volume = _____
of the box

2. Area of a rectangle = 72 sq. ft. Length = 9 ft. Width = _____.

3. Solve and simplify.

a. $7\frac{1}{6}$

b. $6\frac{1}{5}$

$-3\frac{5}{6}$

$-3\frac{3}{10}$

4. The ratio of girls to boys is 2:3.

There are 12 boys. How many girls are there?

5. a. $\frac{3}{5} \times \frac{5}{9} =$

b. $\frac{2}{3} \times \frac{15}{16} =$

6. Write the place value of the underlined digit. 645.234

Solve.

7.
$$\begin{array}{r} 9.05 \\ + 4.2 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 19.6 \\ - 13.48 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 6.5 \\ \times .32 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 7.9 \\ \times 45 \\ \hline \end{array}$$

1. _____

2. _____

3a. _____

b. _____

4. _____

5a. _____

b. _____

6. _____

7. _____

8. _____

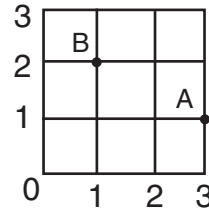
9. _____

10. _____

509



1. Name the reciprocal of a. $\frac{5}{9}$ b. 7
2. a. $7 \div \frac{14}{15} =$ b. $\frac{5}{12} \div 15 =$
3. a. $\frac{8}{9} \div 4\frac{2}{3} =$ b. $6\frac{3}{7} \div 2\frac{2}{14} =$
4. a. $10 \times 3.45 =$ b. $100 \times 5.6 =$
5. a. $6\overline{)13.2}$ b. $5\overline{)130}$
6. a. Write the coordinates of point A.
b. Write the coordinates of point B.



7. Distance = 162 mi. Time = 3 hr. Rate = _____
8. Write $\frac{1}{4}$ as: a. a ratio b. a decimal.
9. Write .52 as: a. a fraction b. percent.
10. There are 8 white marbles and 4 green marbles in a bag. Express the ratio of green marbles to white marbles as a fraction reduced to lowest terms.

- 1a. _____ b. _____
- 2a. _____ b. _____
- 3a. _____ b. _____
- 4a. _____
b. _____
- 5a. _____ b. _____
- 6a. _____
b. _____
7. _____
- 8a. _____
b. _____
- 9a. _____
b. _____
10. _____

510



- Match (1 - 6).
1. Comparison of two numbers a. data
 2. Facts from which a conclusion b. circle graph
may be drawn c. estimation
 3. Every member of a group has an d. ratio
equal chance of being chosen e. bar graph
 4. An opinion of the value of something f. random sample
 5. Illustrated data using wide lines
 6. Illustrated data comparing parts to the whole
- A bag holds 4 quarters, 2 dimes, 1 nickel, 3 pennies
7. State as a ratio the probability of a quarter being selected from the bag.
 8. State the probability as a percent.
 9. $41\overline{)8,938}$
 10. a. $9(8) =$ b. $7 \cdot 6 =$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
- 10a. _____
b. _____

601

1. Write the place of the underlined digit. 23,675,298,013

1. _____

2. Round.
Write the *estimated* answer. $\begin{array}{r} 48 \\ \times 62 \\ \hline \end{array}$

2. _____

3. a. $9 \cdot 5$ ($=, \neq$) $52 - 7$ b. $14 + 8$ ($>, <$) $42 \div 2$

3a. _____ b. _____

4. a. $(4 + 3) \times (15 - 6) =$ b. $(14 \div 2) + (8 - 3) =$

4a. _____ b. _____

5. $N \div 45 = 81$ $N =$

5. _____

6. a. 706 b. $23 \overline{)958}$
 $\times 592$

6a. _____

b. _____

7. Write the largest multiple of 8 that is less than 52.

7. _____

8. List in number order. a. .8 b. .46 c. .09 d. .637

8. _____

9. $1\frac{7}{8}$ is a: a. proper fraction b. improper fraction c. mixed number

9. _____

10. Simplify. a. $\frac{24}{30}$ b. $\frac{14}{8}$

10a. _____ b. _____

602

1. Round. $38,294,672,551 + 53,238,094,776 =$ _____ billions

1. _____

Write the *estimated* answer.

2. Write (E) even or (O) odd.

a. $E + E =$ _____ b. $E - O =$ _____ c. $E + O =$ _____ d. $O - O =$ _____

2a. _____ b. _____

c. _____ d. _____

3. Describe what James ate as a fraction.

a. James divided the apple into 4 parts. He ate 3.

3a. _____ b. _____

b. James had 4 apples. He ate 1.

4. List in number order. a. $\frac{5}{6}$ b. $\frac{3}{4}$ c. $\frac{7}{12}$ d. $\frac{2}{3}$

4. _____

5. a. $4\frac{1}{2}$ b. $7\frac{1}{3}$
 $+ 3\frac{5}{8}$ $- 4\frac{5}{6}$

5a. _____ b. _____

6. .03 = a. three-tenths b. .030 c. $\frac{3}{1,000}$

6. _____

7. a. $8.4 + 2.03 + 9 =$ b. $.74 - .286 =$ 8. a. $2.7 \times .04 =$ b. $5.9 \times .38 =$

7a. _____

b. _____

9. Find the prime factors of 45.

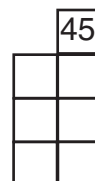
8a. _____

b. _____

9. _____

10. Write $2 \times 2 \times 3 \times 3 \times 3$ in exponential notation.

10. _____



605



1. a. Round to the billions' place. 3,488,763,295
b. Then, write in exponential notation using powers of ten.
 2. a. 5×4 ($=$, \neq) 4×5 b. $2 \times (3 \times 4)$ ($=$, \neq) $(2 \times 3) \times 4$
 3. Convert to Roman or Arabic numerals. a. LXXIV b. 1750.
Select the correct answer from the following list (4 - 6).
a. arc b. chord c. radius
d. pi e. circumference
 4. Half of the diameter of a circle
 5. The distance around the outside of a circle
 6. Curved section of the perimeter of a circle
 7. Find the a. perimeter b. area
-
8. Select a triangular prism.
 - a.
 - b.
 - c.
 9. The number exactly in the middle of a set is the
(a. mean b. median c. mode)
 10. The basic metric unit most similar to a quart is the
(a. gram b. liter c. meter)

- 1a. _____
b. _____
- 2a. _____ b. _____
- 3a. _____
b. _____
4. _____
5. _____
6. _____
- 7a. _____
b. _____
8. _____
9. _____
10. _____

606



1. Use the rules of divisibility. Write (Y) yes or (N) no.
Is 270 divisible by a. 2? b. 3? c. 6? d. 9?
2. What is the value of the variable a in the function table?

+	2	5	1	4
a	6	9	5	8
3. Write an inverse operation for $7 + 5 = 12$.
4. Write (M) multiply or (D) divide. To change
a. meters to kilometers b. grams to milligrams
5. The radius of a circle measures 5 inches.
a. Circumference b. Area
6. Write in percent. a. .34 b. $\frac{6}{100}$
7. Write $\frac{4}{5}$ as a. decimal b. in percent
8. 64% of the 25 students attended music camp.
How many of the students attended music camp?
9. $\frac{n}{15} = \frac{2}{10}$ $n =$ _____
10. Distance = 342 miles rate = 57 mph time = _____

- 1a. _____
b. _____
c. _____
d. _____
2. _____
3. _____

- 4a. _____ b. _____
- 5a. _____
b. _____
- 6a. _____
b. _____
- 7a. _____
b. _____
8. _____
9. _____
10. _____

607



1. Rewrite the problem using its distributive property. $(5 \times 4) + (5 \times 8) = 60$ 1. _____
2. Rewrite $3 \times 15 = 45$ in repeated addition. 2. _____
3. Write 375% as a a. decimal b. mixed number fraction 3a. _____
b. _____
4. A quadrilateral a. is any 4-sided figure 4. _____
b. must have 4 right angles c. must have opposite sides parallel
5. Write in number order. 1, 0, -2, -1, 2 5. _____
6. a. $(-4) + (-3) =$ b. $(-6) + 5 =$ 6a. _____ b. _____
7. How many time zones is the a. world divided into? 7a. _____
b. United States divided into?
8. A parallelogram measures: base 6 meters, height 9 meters 8. _____
Area = _____
9. A triangle measures: base 12 inches, height 7 inches 9. _____
Area = _____
10. What is the a. square of 9? b. square root of 9? 10a. _____ b. _____

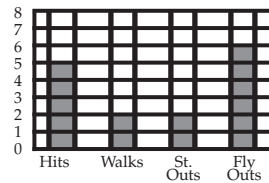
Select the correct word for the blank.

- a. problem b. norm c. ratio
d. data e. chart f. random selection

608




1. Without deliberate choice 1. _____
2. Relation between two numbers 2. _____
3. Facts from which a conclusion can be drawn 3. _____
4. Standard of a particular group 4. _____
5. 18 marbles are in a bag: 5 white, 4 green, 6 red, 2 black, 1 yellow. One marble is drawn out. What is the probability that it will be red? 5. _____
6. Use data from the graph. How many times did Richard bat altogether? 6. _____



7. a. $3.57 \text{ g} =$ _____ mg b. $2 \text{ cm} =$ _____ m 7a. _____ b. _____
8. $\frac{2}{3}$ of a number is equal to 8. What is that number? 8. _____
9. Round to the nearest decimal place. $6.014 \frac{3}{5}$ 9. _____
10. The numbers are 24 and 32. Find the a. least common multiple b. greatest common factor (GCF) 10a. _____ b. _____

609

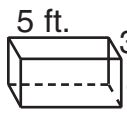


1. Ratio, proper fractions, decimals, and percent **represent all of the numbers between** a. _____ b. _____.
2. The base factors for 20 are (a.) _____. The repeated factors are (b.) _____. The exponents are (c.) _____. Written in exponential notation is (d.) _____.
3. Round to hundred millions' place. 58,637,429,302
4. Write the factor to multiply the number by to approximately reach the given product. $28 \times \underline{\hspace{2cm}} = 3,000$
5. Select from the symbols ($>$, $<$, \geq , \leq) to write a number sentence for the set of even numbers *equal to or less than 16 but greater than 10*.
6. Draw an illustration. Reflect ABC using AB as a line of symmetry. 
7. $\triangle ABC \cong \triangle XYZ$
The ratio is 2:5 AB = 6 in XY = _____
8. The measure of a rectangular prism is:
Volume 72 cu. in., length 4 in., width 3in., height = _____
9. Kevin ate 3 times as many olives as Jodi. Together, they ate 20 olives. a. Jodi ate _____ olives. b. Kevin ate _____ olives.
10. a. Select the perfect square. 12 18 25 32
b. Write the number 16 using the radical sign.

- 1a. _____ b. _____
- 2a. _____ b. _____
c. _____ d. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
- 9a. _____ b. _____
- 10a. _____
b. _____

610



- Solve Problems 1 - 2 mentally (without rewriting).**
1. a. $238 + 463 + 509 =$ b. $9.3 - 2.58 =$
 2. a. $.5 \times 3.82 =$ b. $956 \div 7$
 3. Write the largest multiple of 700 that is less than 5,703.
 4. a. $386 \overline{)16212}$ b. $823 \overline{)41973}$
 5. a. $\frac{4}{15} + \frac{7}{20}$ b. $9\frac{3}{8} - 4\frac{2}{3}$
 6. a. $2\frac{3}{4} \times 20 =$ b. $18 \div 5\frac{1}{3} =$
 7. a. $\frac{3}{8} \times 2400 =$ b. $\frac{4}{5}$ of 1500 =
 8. Use the variable b to represent a range of numbers. James is older than 12 years but younger than 16 years. How old is James? $b =$ _____
 9. a. $\begin{array}{r} 907 \\ \times 3,000 \\ \hline \end{array}$ b. $\begin{array}{r} 263 \\ \times 2,800 \\ \hline \end{array}$
 10. Find the total area of the surface of the prism. 

- 1a. _____
b. _____
- 2a. _____
b. _____
3. _____
4a. _____
b. _____
- 5a. _____ b. _____
- 6a. _____ b. _____
- 7a. _____
b. _____
8. _____
- 9a. _____
b. _____
10. _____

701



Write the number represented by the expanded form.

1. $4 \times 100,000 + 5 \times 1,000 + 3 \times 100 + 6$

1. _____

Write the correct symbol to make the sentences true. ($>$, $<$, $=$)

2. a. $8 _ 7$ b. $14 _ 14$ c. $24 _ 29$

2a. _____

b. _____

c. _____

Complete the table for the given sentence.

$a - b = 25$

a =	52	69	34
b =	3. _____	4. _____	5. _____

3. _____

4. _____

5. _____

Find the number that makes the sentence true.

6. $18 + 5 + 14 + N = 48$

6. _____

7. Find the sum of 5,742 and 3,824.

7. _____

8. Find the difference of 5,742 and 3,824.

8. _____

9. Find the *estimated* answer of $492 + 220$ to the nearest hundred.

9. _____

10. Find the *estimated* answer of $6,443 - 3,861$ to the nearest thousand.

10. _____

702



1. In the multiplication problem $67 \times 7 = 469$, what is the
a. multiplier b. multiplicand c. product ?

1a. _____

b. _____

c. _____

2. In the division problem $75 \div 5 = 15$, what is the
a. dividend b. quotient c. divisor ?

2a. _____

b. _____

3. What is the missing number in the sequence 1, 3, 9, $_$, 81, 243...?

c. _____

3. _____

4. What is the product of the exponential number 4^3 ?

4. _____

5. What is the product of the exponential number 54×10^8 ?

5. _____

What is the answer to

6. $79 \times 68 =$

6. _____

7. $896 \times 76 =$

7. _____

8. $525 \div 19 =$

8. _____

9. $47,352 \div 78 =$

9. _____

10. If your classroom had 38 pupils and 1 was absent on Monday, 2 on Tuesday, 4 on Wednesday, 0 on Thursday, and 3 on Friday, what was the average daily attendance?

10. _____

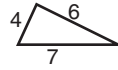
703



1. What is the name of AC and/or DB ?

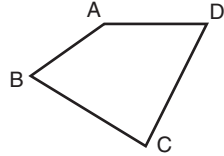


2. What do we use to measure an angle?
 a. ruler b. scale c. protractor
3. What is the perimeter of the triangle?



4. What is the name of a triangle that has one angle equal to 90° ?

5. The name of



is

- a. parallelogram ABCD b. trapezoid ABCD
 c. quadrilateral ABCD d. rectangle ABCD

6. What is the sum of the angles of a quadrilateral?
7. What is the diameter of a circle if the radius is 3 inches?
8. What is the circumference of a circle with a radius of 3 inches?
9. What is the area of a rectangle with dimensions of 16 ft. and 18 ft.?
10. What is the sum of the angles of a hexagon?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

704



1. Raise $\frac{5}{9}$ to higher terms with a denominator of 54.
2. Find the quotient of $\frac{45}{7}$.
3. Select the correct symbol. $\frac{7}{8}$ ($<$, $>$) $\frac{7}{9}$.
4. Write $2\frac{1}{5}$ as a decimal.
5. Write .00034 as a percent.
6. Show the ratio of 9 nickels to 34 pennies.
7. Write 64% as a fraction reduced to lowest terms.
8. Write .13% as a decimal.
9. What is the decimal equivalent to the fraction $\frac{7}{8}$?
10. Convert 5 grams to milligrams.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

705



1. Show how a set is written if the elements of the set are 5, 7, 9, 11.
2. Given $A = \{1, 2, 3, 4, 5\}$, a subset of A would be
 - a. $\{1, 2, 3, 4, 5, 6\}$
 - b. $\{1, 2, 3\}$
 - c. $\{0\}$
 - d. $\{2, 4, 6, 8\}$
3. The intersection of sets $A = \{3, 4, 5, 6, 7\}$ and $B = \{3, 6, 9, 12\}$ is
 - a. $\{3, 6\}$
 - b. $\{3, 4, 5, 6, 7\}$
 - c. $\{3, 4, 5, 6, 7, 9, 12\}$
 - d. an empty set
4. Write CXIV in Arabic numerals.
5. Write a number that is 10,000 times larger than .0008 .
6. Show 7,000,000 as a power of 10.
7. What is the greatest common factor of 24 and 64?
8. What is the least common multiple of 20 and 28?
9. List the prime factors of 16 using exponential notation.
10. 58 is an example of a (a. prime b. composite) number.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

706



1.

a. $\frac{3}{4}$	b. $9\frac{1}{3}$
$+\frac{7}{8}$	$+\frac{4}{9}$
2.

a. $\frac{7}{15}$	b. $3\frac{7}{12}$
$-\frac{4}{45}$	$-1\frac{3}{4}$
3. Add: $21.023 + 5.6 =$
4. Subtract $4.3 - 3.28 =$
5. Write the decimal fraction .07 as a common fraction.
6. Write the decimal .255 as a common fraction in lowest terms.
7. Write the common fraction $\frac{3}{7}$ as a decimal fraction to the nearest hundredth.
8. From the list of fractions and decimals, find three that are equivalent in value.

a. $\frac{5}{8}$	b. $\frac{1}{4}$	c. 0.625	d. $\frac{25}{40}$	e. .0625	f. $\frac{25}{64}$
------------------	------------------	----------	--------------------	----------	--------------------
9. A radio announcer takes $2\frac{7}{8}$ minutes to play each record and $1\frac{1}{2}$ minutes to read a commercial. How long does he take to read a commercial and play two records?
10. The first game of a double-header lasted 2.1 hours. The second game lasted only $1\frac{4}{5}$ hours. How much longer was the first game than the second game?

- 1a. _____ b. _____
- 2a. _____ b. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____ / _____
9. _____
10. _____

- 707
-
- | | | | | | | | | |
|----|----|---|----|--------------------------------------|-----|-------------------|----|-------------------|
| 1. | a. | $\frac{2}{3} \times \frac{4}{5} =$ | b. | $12 \times 6 \frac{1}{8} =$ | 1a. | <u> </u> | b. | <u> </u> |
| 2. | a. | $\frac{3}{8} \div \frac{1}{4} =$ | b. | $\frac{4}{5} \div 6 =$ | 2a. | <u> </u> | b. | <u> </u> |
| 3. | a. | $5 \frac{2}{3} \times 1 \frac{1}{17} =$ | b. | $2 \frac{3}{8} \div 2 \frac{5}{7} =$ | 3a. | <u> </u> | b. | <u> </u> |
| 4. | a. | $.85 \times 2.1 =$ | b. | $41.76 \times 7.4 =$ | 4a. | <u> </u> | b. | <u> </u> |
| 5. | a. | $83.78 \div 2.36 =$ | b. | $3.18 \div .16 =$ | 5a. | <u> </u> | b. | <u> </u> |
| 6. | a. | $3.451 \times 100 =$ | b. | $7.39 \div 1,000 =$ | 6a. | <u> </u> | b. | <u> </u> |
- Find the missing number.**
- | | | | |
|-----|---|-----|-------------------|
| 7. | 25% of 28 = N | 7. | <u> </u> |
| 8. | 20 = 50% of N | 8. | <u> </u> |
| 9. | 24 = N% of 96. | 9. | <u> </u> |
| 10. | Debra earns a 6.5% commission. One week, her total sales were \$4,375. How much did she earn that week? | 10. | <u> </u> |

- 708
-
- | | | | |
|-----|--|-----|-------------------|
| 1. | If the area is 24 sq. ft. and the length is 8 ft., what is the width? | 1. | <u> </u> |
| 2. | If a square is 5 in. on a side, what is its perimeter? | 2. | <u> </u> |
| 3. | How much interest will be paid on \$350 if the rate of interest is 18%? | 3. | <u> </u> |
| 4. | Of the following choices, which one is an equation?
a. 4 b. xy c. $14 = 2 \times 7$ d. $(3 + 5) \times 8$ | 4. | <u> </u> |
| 5. | What is the ratio 15:75 reduced to lowest terms? | 5. | <u> </u> |
| 6. | Write the proportion: Four is to nine as twelve is to twenty-seven. | 6. | <u> </u> |
| 7. | Which of these is a true proportion?
a. 6:12 = 20:30 b. 2:3 = 8:12 c. 1:5 = 5:1 d. 6:8 = 24:34 | 7. | <u> </u> |
| 8. | What is the approximate rate of travel of an airplane that goes 1,800 miles in 3.5 hours? | 8. | <u> </u> |
| 9. | Jody plans to have a picture enlarged. The picture is now 2 in. wide by 3 in. long. When enlarged, the length will be 42 in. What will be the width? | 9. | <u> </u> |
| 10. | The ratio of hamsters to gerbils in a pet shop is 1:3. If the pet shop has 9 hamsters, how many gerbils does it have? | 10. | <u> </u> |

801



1. Write in numerals: two million, five thousand, two hundred six.
2. What is the position of the 5 in the number 500,493?
3. How many digits in 8,720?
4. Round 489,045 to the nearest ten thousand.
5. How many fish did Bill Knox catch on Thursday?

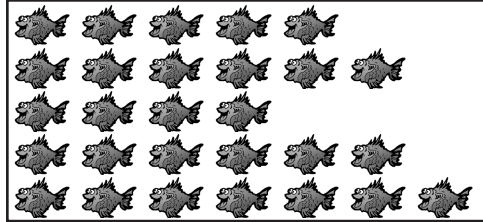
Monday

Tuesday

Wednesday

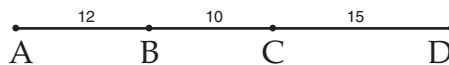
Thursday

Friday



each  represents 4 fish

6. Find the quotient of 27 and 2025.
7. How many feet in 696 inches?
8. If the perimeter of a square is 272 in., what is the length of each side?
9. AB = 12 in., BC = 10 in. and CD = 15 in. What is the length of AD?



10. A pyramid has a square base with an edge of 42 meters. Find the area of the base.

802



1. Write MDCXIV in Arabic numerals.
2. The number 15 in the base two number system is (a. 10000_2 b. 1011_2 c. 1111_2 d. 1101_2).
3. Write the following in exponential form: $5 \times 5 \times 5 \times 5$
4. $(2 + 6) + 3 = 2 + (6 + 3)$ is an example of the (a. associative b. commutative) property of addition.
5. List three prime numbers between 16 and 24.
6. Write 36 in prime factorization.
7. What is the square root of 36?
8. What is the lowest common denominator of $\frac{7}{8}, \frac{9}{10}, \frac{1}{12}$?
9. Reduce the fraction $\frac{85}{102}$ to lowest terms.
10. What is the next number in the number pattern $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \dots$?

803



1. What is the smallest fraction equivalent to $\frac{6}{8}$, $\frac{15}{20}$, and $\frac{21}{28}$?
2. Raise the fraction $\frac{2}{7}$ to higher terms with a denominator of 42.
3. Write the improper fraction $\frac{11}{7}$ as a mixed number.
4. Express 18 inches and 2 yards as a ratio.
5. Arrange in order from smallest to largest:
 $\frac{1}{2}$, $1\frac{2}{3}$, $\frac{5}{6}$, $\frac{7}{12}$, $\frac{17}{8}$, $\frac{1}{8}$
6. Write the fraction $\frac{1}{5}$ as a decimal.
7. Write 71% as a fraction.
8. What is the height of a building that casts a shadow of 25 ft. at the same time of day that a stick 8 ft. long casts a shadow of 5 ft.?
9. The number 10^{-3} means (a. 7 b. 0.001 c. -30 d. 10,000).
10. If John sells \$50 worth of merchandise, he makes \$5. What is his percent of commission?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

804



1. Add and simplify: $\frac{2}{3} + \frac{1}{2} =$ 2. $357\frac{4}{5}$
 $98\frac{2}{3}$
 $+ 162\frac{7}{15}$
3. Subtract and simplify: $\frac{4}{5} - \frac{4}{7} =$ 4. $7\frac{1}{4}$
 $- 5\frac{3}{5}$
5. Add: $754.32 + 16.304 + 9.24 =$
6. Subtract: $7.37 - 3.402 =$
7. Add and subtract: $5.326 + 0.17 - 2.3904 =$
8. Round 72,048 to the nearest 10.
9. Write an improper fraction using the numbers 5 and 10.
10. Change the fraction $\frac{3}{5}$ to a decimal fraction.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

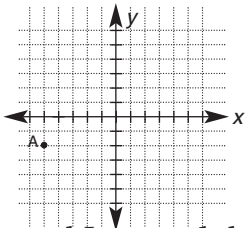
805



1. Multiply and simplify: $\frac{2}{15} \times 6 =$ 1. _____
2. Multiply and simplify: $8\frac{2}{3} \times 6\frac{3}{4} =$ 2. _____
3. Multiply:
$$\begin{array}{r} 7,456 \\ \times 0.0014 \\ \hline \end{array}$$
 3. _____
4. Divide: $20.1 \overline{)1,616.04}$ 4. _____
5. Divide and simplify. $\frac{5}{8} \div \frac{3}{4} =$ 5. _____
6. Divide and simplify: $4\frac{9}{10} \div 2\frac{3}{5} =$ 6. _____
7. If a family has an annual income of \$15,000 and budgets $\frac{1}{5}$ of it for housing, what is the amount of money that is reserved for housing? 7. _____
8. What number is 12 percent of 30? 8. _____
9. 14.72 is 23% of what number? 9. _____
10. What percent of 120 equals 21? 10. _____

806

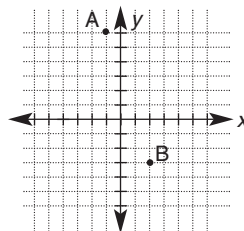


1. Find the mean. 2. Find the median. 3. Find the deviation. 1. _____
- Given the following numbers: 19, 28, 37, 23, 17, 42, 58
4. What is the frequency distribution of 2? 2. _____
- Given the following numbers: 2, 2, 3, 6, 1, 9, 4, 2, 5, 7, 6, 8, 6, 2
- A box contains ten balls of like shape and size. Three are red, two are white, and five are blue. The balls are also numbered from 1 to 10. Find the following probabilities. 3. _____
5. one red ball. 4. _____
 6. one ball with a number >5. 5. _____
 7. Given the function rule $d = r \times t$ and the following table, what is the missing ordered-pair number? 6. _____
- | | | | | | |
|---------------|----|----|-----|-----|---|
| Time in hours | 1 | 2 | 3 | 4 | 5 |
| Distance | 40 | 80 | 120 | 160 | |
8. What are the missing order-pair numbers for $f(n) = 3 \times n + 2$? 7. _____
- | | | | | |
|--------|---|---|---|---|
| n | 0 | 1 | 2 | 3 |
| $f(n)$ | 2 | | | |
9. Write the ordered pair for point A. 8. _____
- 
10. A school committee has two girls, Mary and Jean and three boys, Jim, Doug, and Allen. What is the probability of Mary or Doug being chosen by drawing to represent the committee at an assembly? 9. _____

807



- Select the positive integers. (a. 0, 1, 2, 3, 4,... b. 1, 2, 3, 4,... c. $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}$ d. $\frac{1}{2}, 1, 1\frac{1}{2}, 2, 2\frac{1}{2}$).
- Write the integers -8, 2, 0, -6, 5, 10, -15 in order from smallest to largest.
- What is the absolute value of $|-32|$?
- Find the sum: $25 + (-11) + (-15) + 7 + (-8) + 17$.
- Find the difference: $-15 - (-28)$
- Find the product: $2 \times (-9) \times 0$
- Find the value of q^3 when $q = -3$.
- What are the coordinates of (a. point A and b. point B) on the graph?

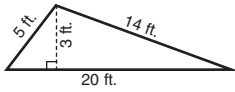
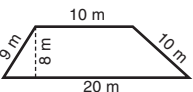
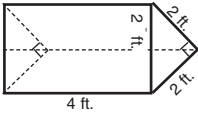


- If $a = 2$, $b = -5$, and $c = 0$, what is the answer to this algebraic expression: $a^2b + (-3)^c - \frac{c}{ab} =$
- Find the missing number for a in the table to make the given sentence true.

$a - b = -1$	a	0	3	-
	b	1	4	-2

808



- Find the area of the given triangle. 
- Find the area of the given trapezoid. 
- Find the circumference of a circle with a radius of 4.1 cm.
- Find the area of a circle with a diameter of 5 ft.
- Find the volume of a tank with measurements $1\frac{1}{2}$ ft., 3 ft. and 2 ft.
- Select the area of the given prism. 
 - $8\sqrt{2}$ ft.²
 - $12\sqrt{2}$ ft.²
 - 20 ft.² + $8\sqrt{2}$ ft.²
- Select the volume of a paint can 6 in. high and $7\frac{1}{2}$ in. in diameter.
 - $28\frac{1}{8}\pi$ in.³
 - 45π in.³
 - $84\frac{3}{8}\pi$ in.³
- Convert 270 ft.³ to cubic yards.
- Select the surface area of a sphere with a radius of 5 in.
 - 50π in.²
 - $\frac{125}{3}\pi$ in.²
 - 100π in.²
- Select the formula for the surface area of a cone.
 - $S = \pi r(s + r)$
 - $S = 2\pi r^2 + 2\pi rh$
 - $S = 4\pi r^2$

809



1. What is the distance between -32 and +50 on the number line? 1. _____
2. What is the coefficient of the term $\frac{2}{3}xy$? 2. _____
3. Write this phrase in numbers:
a number divided by three plus six 3. _____
4. Write this phrase in numbers:
five less than three times a number 4. _____
5. Find the solution to $y - \frac{3}{4} = 1\frac{3}{4}$. 5. _____
6. Find the solution to $18x + 11 = 29$. 6. _____
7. Simplify: $14xy - 6x - 7xy + 8x - 6xy$ 7. _____
8. Solve: $3x - 6 = 2x - 9$ 8. _____
9. Mark is three times as old as his sister. Two years ago he was seven times as old as his sister. Their present ages are:
a. Mark 6 yrs; sister 2 yrs c. Mark 9 yrs; sister 3 yrs 9. _____
b. Mark 15 yrs; sister 5 yrs d. Mark 16 yrs; sister 4 yrs
10. Pam found that she could read 9 pages of a novel in 20 minutes. At this rate, how long would it take her to read 378 pages? 10. _____

810



1. Change 1.6 to percent. 1. _____
2. Find the products of (a. 4^2) and (b. 3^3). 2a. _____ b. _____
3. Find the area of a circle to the nearest tenth, with a radius of 8.1 cm. 3. _____
4. Find the volume of a rectangular solid with length 14 in., width 8 in., and height 6 in. 4. _____
5. Use the distributive property to find the product of $(x + 3)(y - 4)$. 5. _____
6. Translate to algebraic symbols: Two more than four times a number is one less than the number. 6. _____
7. Write the opposites of 6, -9, 0. 7. _____
8. The sum of four consecutive integers is 18. Find the integers. 8. _____
9. Write the numeral 5,000,000 in powers of ten. 9. _____
10. What is the greatest common factor of 12, 18, and 30? 10. _____

