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Name: _____

**Pre-Algebra
Summer Math Study Guide**

After you have practiced the skills on Khan Academy (list available on bdcs.org/read), complete the following study guide. Be sure to show all work and describe your reasoning, as this study guide should be a resource for you at the beginning of the school year. If you have any questions, be sure to contact me at gpinkerton@bdcs.org. I will reply within 48 hours Monday-Friday.

Round Decimals

1. Round 644.4 to the nearest one.
2. Round 398.266 to the nearest ten.

Round Decimals Challenge

Fill in the blank with the number below that would match when rounded to the nearest one.

- | | |
|-------------|-----------|
| 3. _____ 12 | a. 14.099 |
| 4. _____ 13 | b. 14.55 |
| 5. _____ 14 | c. 12.38 |
| 6. _____ 15 | d. 12.522 |

Multiplying Decimals like 2.45×3.6 (Standard Algorithm)

Perform the operation below without the use of a calculator. Show your work.

7. $4.7 \times 6 = ?$
8. $1.81 \times 9 = ?$

Identify Factors & Multiples

Given $9 \times 2 = 18$, mark the following statements as *true* or *false*.

- | | |
|-----------|-----------------------|
| 9. _____ | 9 is a factor of 18 |
| 10. _____ | 18 is a multiple of 2 |
| 11. _____ | 18 is a factor of 9 |
| 12. _____ | 9 is a multiple of 2 |

Add & Subtract Fractions Word Problems

13. Sarah's hair was $\frac{2}{3}$ of a foot long. At her latest haircut, she cut off $\frac{1}{6}$ of a foot of her hair. How long is her hair now? Include units in your answer.

Multiply Fractions Word Problems

14. You spent $\frac{1}{2}$ of the day hiking, but you lost your way for $\frac{5}{6}$ of the time. What fraction of the day were you lost?

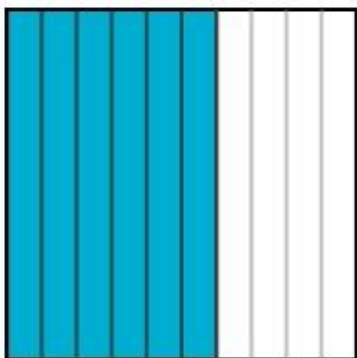
Dividing Fractions Word Problems

15. You're going on a road trip with $\frac{4}{5}$ of a tank of fuel in the car. You use $\frac{1}{10}$ of a tank per day. How many days will the fuel last?

Relate Fractions, Decimals, & Percents

Express each of the shaded areas below as a fraction, a decimal, and a percent of the whole.

16.

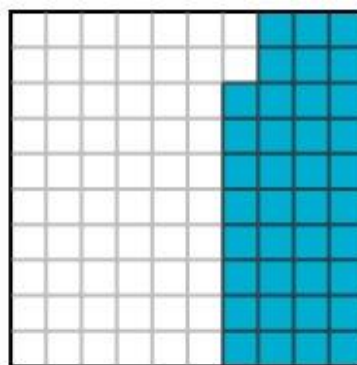


a. Fraction: _____

b. Decimal: _____

c. Percent: _____ %

17.



a. Fraction: _____

b. Decimal: _____

c. Percent: _____ %

One-Step Addition & Subtraction Equations

Solve the equations below.

18. $x - 21 = 6$

19. $19 = 14 + k$

One-Step Multiplication & Division Equations

Solve the equations below.

20. $6 = \frac{m}{8}$

21. $7r = 42$

Answer Key

1. 644
2. 400
3. c
4. d
5. a
6. b
7. 28.2
8. 16.29
9. True
10. True
11. False
12. False
13. Sarah's hair is $\frac{1}{2}$ of a foot long
14. You were lost for $\frac{5}{12}$ of the day
15. The fuel will last 8 days
16. a. $\frac{3}{5}$ b. 0.6 c. 60%
17. a. $\frac{19}{50}$ b. 0.38 c. 38%
18. $x = 27$
19. $k = 5$
20. $m = 48$
21. $r = 6$