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Math 7
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 83,960.11to the nearest hundred

2. Round 20.1551 to the nearest tenth

Adding & Subtracting Decimals Word Problems

3. During a recent rainstorm, 8 centimeters of rain fell in Dubaku's hometown, and 2.36 centimeters of rain fell in Elliot's hometown. During the same storm, 15.19 centimeters of snow fell in Alperen's hometown. How much more rain fell in Dubaku's town than in Elliot's town?

4. Rosa is building a guitar. The second fret is 33.641 millimeters from the first fret. The third fret is 31.749 millimeters from the second fret. How far is the third fret from the first fret?

Multiplying Decimals like 0.847 x 3.54 (Standard Algorithm)
Perform the operations below.

5. $71.2 \times 0.58 =$ 6. $28.2 \times 4.42 =$

Dividing Decimals: Thousandths
Perform the operations below.

7. $48.389 \div 0.83 =$ 8. $43.396 \div 57.1 =$

Multiplying and Dividing with Powers of 10
Perform the operations below.

9. a. $45.023 \div 10^1 =$ b. $45.023 \div 10^2 =$ c. $45.023 \div 10^3 =$

10. a. $95 \times 10^3 =$ b. $95 \times 10^4 =$ c. $95 \times 10^5 =$

Order of Operations
Simplify the expressions below.

11. $6 \div 3 + 9^2 - 4 =$

12. $2^8 - 10 - 15 \div 3 =$

Add and subtract fractions word problems

13. Suppose that the first team member in a 3-person relay race must run $2\frac{1}{4}$ laps, the second team member must run $1\frac{1}{2}$ laps, and the third team member must run $3\frac{5}{8}$ laps. How many laps in all must each team run?

14. Gabriella bought a pile of bricks to build a brick wall. Yesterday, she used $\frac{5}{8}$ of the bricks. Tomorrow, she plans to use another $\frac{1}{4}$ fraction of the original brick pile. What fraction of the brick pile will she have left after tomorrow?

Multiply Fractions Word Problems

15. Furry Pets store has 20 animals, and $\frac{2}{5}$ of them are puppies. Pets Galore pet store has 12 animals, and $\frac{3}{4}$ of them are puppies. Which pet store has more puppies?

16. Julia has a role in the school play. On Tuesday, she practiced $\frac{2}{3}$ of the time that she practiced on Wednesday. If she practiced $\frac{5}{6}$ hours on Wednesday, how many hours did she practice on Tuesday?
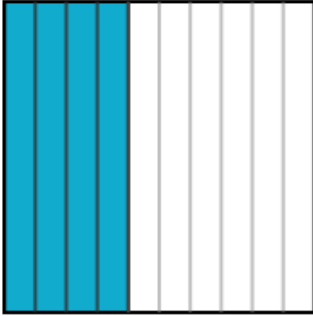
Dividing Fractions Word Problems

17. A piano teacher has $4\frac{1}{2}$ hours available to teach in a night. Each lesson will last $1\frac{1}{2}$ hours. How many lessons can the teacher schedule in a night?

18. Yao Xin puts $\frac{3}{10}$ liters of potting soil in each pot for planting flowers. She has $5\frac{2}{3}$ liters of potting soil. How many pots can Yao Xin fill?

Relate Fractions, Decimals, and Percents
Express the shaded areas below as a fraction, a decimal, and a percent of the whole
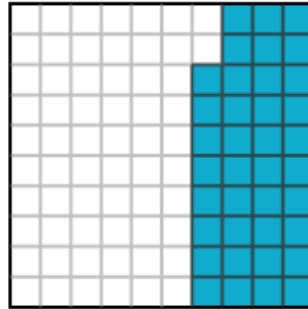
19.

a. Fraction: _____

b. Decimal: _____

c. Percent: _____

20.

a. Fraction: _____

b. Decimal: _____

c. Percent: _____

Answer Key

1. 84,000
2. 20.2
3. 5.64 cm
4. 65.39 mm
5. 41.296
6. 124.644
7. 58.3
8. 0.76
9. a. 4.5023 b. 0.45023 c. 0.045023
10. a. 95,000 b. 950,000 c. 9,500,000
11. 79
12. 241
13. $7\frac{3}{8}$ laps
14. $\frac{1}{8}$
15. Pets Galore. Furry Pets has 8 puppies and Pets Galore has 9 puppies
16. $\frac{5}{9}$ hours
17. 3 lessons
18. $18\frac{8}{9}$
19. $\frac{2}{5}$, 0.4, 40%
20. $\frac{19}{50}$, 0.38, 38%