Unit 12 Study Guide

Name **Answer Key**   Date _____

1. Roberto earns $3 per hour babysitting. How much does he earn in 5 hours?
   You may create a rate table to help you. $3 × 5hrs = $15

2. A box of 8 pieces of chalk costs 62 cents. What is the cost of 1 piece of chalk?
   You may create a rate table to help you. 62¢ ÷ 8 = 0.0775 or 0.08

   ```
        .0775
   8 )1.6200
       -0
       ────
       56 12
       -56
       ────
        56 0
        -56
        ────
         40
         -40
         ──
          0
   ```

3. The Devis family drove 295 miles to visit relatives. It took 5 hours. At that rate, how many
   miles had the Devises driven in 3 hours? Fill in the table. 3 hours = 177 miles

Hours	1	2	3	4	5
Miles	59	118	177	236	295

   ```
       59 miles
   5 )295
      -25
      ──
       45
      -45
      ──
       0
   ```

4. Roberto earns $3 per hour babysitting. How much does he earn in 5 hours?
   You may create a rate table to help you. $3 × 5 hrs = $15

5. Shawna works 3 hours a day, 5 days a week. She earns $48.00 per day.
   a. How much does she earn per hour? $48 ÷ 3 = $16 per hour
   b. How much does she earn per week? $48 × 5 days = $240

6. List the factor pairs of 12.

   __1__ and __12__ , __2__ and __6__ , __3__ and __4__

7. Name all the factors of 28. 1, 2, 4, 7, 14, 28

8. Name all the factors of 32. 1, 2, 4, 8, 16, 32

9. Name all the factors of 84. 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, 84

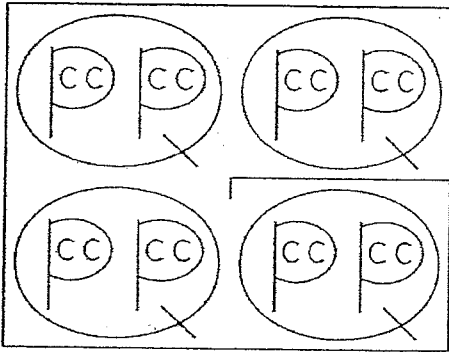10. Name all the factors of 66. 1, 2, 3, 6, 11, 22, 33, 66

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11. Compare. Write <, >, or = for the ◯.

    -45 ⟩ -65

12. Write the following set of numbers in order from largest to smallest.
    $0.09, -1.3, -0.001, -2.3, 1.2, 0.01$ $-2.3, -1.3, -0.001, 0.01, 0.09, 1.2$

13. Use the diagram to help you solve the problems.

    a. __32__ c = 2 gal
    b. 22 qt = __5__ gal __2__ qt
    c. 10 c = __2__ qt __2__ c
    d. 15 pt = __7__ qt __1__ pt
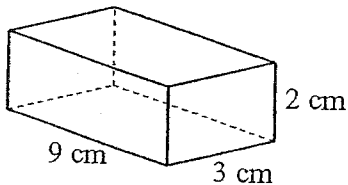   e. 3 qt = __12__ c

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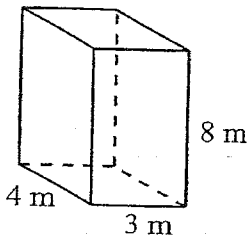
14. Calculate the volume of each rectangular prism.

a.

$V = L * W * H$

$V = 9 * 3 * 2 = 54 cm^2$

$V = 54 cm^3$

2 cm
9 cm
3 cm

b.

8 m
4 m
3 m

$V = 4 * 3 * 8 = 96 m^3$

$V = 96 m^3$

15. Solve the open sentence.

$642.123 + 123.230 = d$ $d = 765.353$

$$\begin{array}{r} 642.123 \\ + 123.230 \\ \hline 765.353 \end{array}$$

16. Find the solution of each open sentence.

$26.69 = 12.15 + x$ $x = 14.54$

$$\begin{array}{r} 26.69 \\ - 12.15 \\ \hline 14.54 \end{array}$$

17. Solve the open sentence.

$94.658 - 92.801 = d$ $d = 1.857$ ⟶

$$\begin{array}{r} 9\overset{3}{4}.658 \\ - 92.801 \\ \hline 1.857 \end{array}$$

18. Solve.

$m - 26.6 = 27.1$

$m = 53.7$

$$\begin{array}{r} 26.6 \\ + 27.1 \\ \hline 53.7 \end{array}$$

19. Write the set of fractions in order from smallest to largest.

$-\dfrac{1}{14}, \dfrac{4}{14}, \dfrac{2}{14}, -\dfrac{7}{14}, \dfrac{9}{14}$

$-\dfrac{7}{14}, -\dfrac{1}{14}, \dfrac{2}{14}, \dfrac{4}{14}, \dfrac{9}{14}$

Order the fractions from smallest to largest.

20. $\dfrac{1}{6}, -\dfrac{3}{4}, \dfrac{14}{24}, -\dfrac{12}{19}, \dfrac{5}{8}$

$-\dfrac{3}{4}, -\dfrac{12}{19}, \dfrac{1}{6}, \dfrac{14}{24}, \dfrac{5}{8}$

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Order the fractions from smallest to largest.

21. $-\dfrac{3}{9}$, $-\dfrac{4}{32}$, $\dfrac{9}{11}$, $\dfrac{5}{7}$, $\dfrac{2}{14}$ $-\dfrac{3}{9}$, $\dfrac{-4}{32}$, $\dfrac{2}{14}$, $\dfrac{5}{7}$, $\dfrac{9}{11}$

22. $\dfrac{2}{8}$, $\dfrac{13}{26}$, $-\dfrac{5}{10}$, $\dfrac{2}{6}$, $-\dfrac{11}{33}$ $-\dfrac{5}{10}$, $\dfrac{-11}{33}$, $\dfrac{2}{8}$, $\dfrac{2}{6}$, $\dfrac{13}{26}$

23. $\dfrac{3}{18}$, $-\dfrac{9}{81}$, $-\dfrac{4}{16}$, $\dfrac{1}{5}$, $\dfrac{15}{45}$ $-\dfrac{4}{16}$, $\dfrac{-9}{81}$, $\dfrac{3}{18}$, $\dfrac{1}{5}$, $\dfrac{15}{45}$

24. There are ③ three schools in Somertown. Each school has 239 students. A friend estimates there are 1,200 students at all three schools. Is this reasonable? Explain. → estimate ~200 students
    200 + 200 + 200 = 600   1,200 is not reasonable.
    or 200 × 3 schools = 600

25. Katie is buying a package of erasers at a store. The store sells packages of 23 erasers for $2.30 and 28 erasers for $1.96. Which package offers the better buy? Explain. The package of 28 erasers
    $2.30 ÷ 23 erasers = $0.10 $1.96 ÷ 28 = $0.07   is cheaper. (3¢ per eraser cheap

26. Use the sign below to solve the problem. Explain how you found your answer.

30 cents each
6 for $1.60
$3.20 a dozen
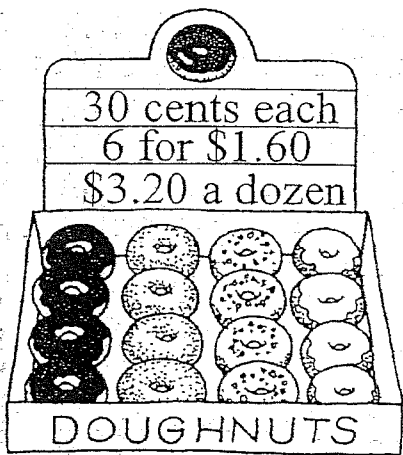
DOUGHNUTS

① 30¢ * 50 = $15.00

② 1.60 × 8 = $12.80 + 60¢ = $13.40
   (for 6)   (for 2 more donuts)

③ $3.20 × 4 = $12.80 + 60¢ = $13.40
   (a dozen)   (2 more donuts)

Joey goes to Doreen's Delicious Doughnuts to buy doughnuts for the class party. What is the least amount of money he will have to pay for 50 doughnuts? Explain.

$13.40 is the least amount of money... if you buy 4 dozen donuts at $3.20 plus 2 extra donuts at 30¢. Or 8 boxes of 6 donuts for $1.60 plus 2 extra donuts at 30¢.