M09 Problems

1. Round each number to the indicated place value.
   a. 6,070,534 nearest tens
   b. 9.50955 nearest thousandths

2. Use front-end rounding to estimate the sum: 4,715 + 3,489 + 5,550

3. Use the **associate property of multiplication** to find the product: \((16 \times 50) \times 2\)

4. What property is being illustrated here? Be specific!
   \(abc = cab\)

5. When completely unrolled, a long sheet of gift wrapping paper has the dimensions below. How many square feet of gift wrap are on the roll?

   ![Gift Wrapping Paper Dimensions]

6. Divide, if possible.
   a. \(\frac{0}{15}\)
   b. \(-\frac{750}{0}\)
   c. \(-490 \div (-35)\)
   d. \(-\frac{52,000}{4,000}\)

7. Find the prime factorization of 792.

8. Find the LCM and GCF of the given numbers: 26, 39, and 65

9. Evaluate each expression.
   a. \(\frac{15+5[12 - (2^2+4)]}{5(2+4) - 7}\)
   b. \((8,795,436)^0\)

10. Evaluate each expression.
    a. \(-11^2 - 11^2\)
    b. Find the product of \(-6\) and the opposite of 10.

11. Evaluate each expression.
    a. \(-[12 - (2^5 + \frac{40}{4})]\)
    b. \(-|8 \div (-2) - 5|\)
    c. \(\frac{11+(-2 \cdot 2+3)^2}{|15+(-3 \cdot 4-8)|}\)
12. Solve each equation. Be sure to check your solutions!
   a. \(-2(5) = \frac{y}{3} + 3\)  
   b. \(4(9h + 2) + 8h = 4(-h - 18)\)

13. Evaluate the following expression for the given values of the variables.
   \[-\frac{|2x-3y+10|}{3-y}\] for \(x = 0\) and \(y = -4\)

14. Simplify by combining like terms, if possible.
   a. \(4v^2 + 8 - v - 5 + 10v^2 - 9v\)  
   b. \(10(y - 1) - 6 - (y + 8)\)

15. Multiply. Write the product in simplest form.
   \(\left(\frac{-20cd}{21d^2}\right) \left(\frac{-14c^2d}{55c^2d^2}\right)\)

16. Divide. Simplify each quotient, if possible.
   a. \(\frac{-21}{31} \div (-7)\)  
   b. \(-\frac{7}{10} \div \left(-1\frac{1}{14}\right)\)

17. Add and simplify, if possible.
   a. \(-3 + \frac{5}{8}\)  
   b. \(\frac{9}{17a} + \frac{5}{17a}\)  
   c. \(191\frac{1}{2} + 233\frac{1}{16}\)

18. Subtract and simplify, if possible.
   a. \(\frac{12}{13} - \frac{6}{r}\)  
   b. \(41\frac{2}{21} - 6\frac{5}{7}\)

19. Add.  
   \(52.763 + 9.1 + 128\)

20. Subtract.  
   \(-15.5 - |(-19.8 + 5.7)|\)

   a. \((-10,000)(-13.19)\)  
   b. \((-0.06)^2\)

22. Divide.
   a. \(0.58 \sqrt{0.1566}\)  
   b. \(\frac{1.674-5(0.222)}{(0.1)^2}\)
23. Write the following fraction as a decimal. Use an overbar in your answer if necessary.

\[-\frac{7}{11}\]

24. Simplify the following. Leave your answer in decimal form.

\[
\left(\frac{-5}{8}\right)\left(5.3 - 3 \frac{9}{10}\right)
\]

25. Write each percent as a fraction. Simplify, if possible.

a. \(9 \frac{5}{6}\)%
   b. 23%
   c. 0.45%

26. Write each percent as a decimal.

a. 93%
   b. 7 \(\frac{3}{4}\)%

27. Write each decimal or whole number as a percent.

a. 0.57
   b. 7

28. Write the fraction as a percent.

\[
\frac{3}{8}
\]

29. Translate each sentence to a percent equation (or proportion) and then solve to find the unknown number.

a. 24 is 16% of what number?

b. What number is 5.6% of 40?

c. 102% of 105 is what number?