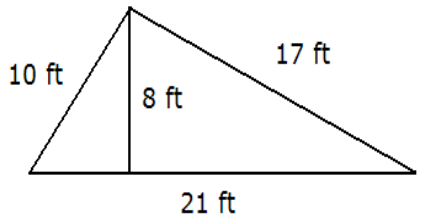
Problem Set 27

1. Use words to write the number 7823 022 343. seven billion, eight hundred twenty-three million, twenty-two thousand, three hundred forty-three

2. Round 39 649 942 to the nearest hundred thousand. 39 600 000

3. Find the perimeter and area of the triangle shown on the picture below. Include units in your computation and answer. $P = 48$ ft $A = 84\,\text{ft}^2$



4. Find the least common multiple of 520 and 100. 2600

5. Find the average of -11, 30, -20, 21, -48, -4, and 25. -1

6. Find $\frac{2}{5}$ of 200. 80

7. Write $\frac{1}{4}$ as a fraction with denominator 12. $\frac{3}{12}$

8. Reduce each of the following fractions to lowest terms.
   a) $\frac{6}{8}$ $\frac{3}{4}$ b) $\frac{36}{63}$ $\frac{4}{7}$

9. Which fraction is larger, $\frac{4}{5}$ or $\frac{5}{7}$? $\frac{4}{5}$

10. Perform the following operations. Show all steps.
    a) $2(-3)^2 + (-2)^2 - (3^2+1) - 4(-8) \div (-2) + 3 =$ -1
    b) $2\left((-3)^2 + (-2)^2\right) - 3^2 + 1 - 4(-8) \div (-2) + 3 =$ 5
    c) $2\left((-3)^2 + (-2)^2 - (3^2+1)\right) - 4(-8) \div (-2) + 3 =$ -7
    d) $2\left((-3)^2 + (-2)^2\right) - ((3^2+1) - 4(-8) \div (-2) + 3) =$ 29
    e) $5(-1)^5 + 4(-1)^4 + 3(-1)^3 + 2(-1)^2 + 1(-1) =$ -3
    f) $2^3 - 3(5 - (2 - 3^3)) + 1 =$ -81
    g) $\dfrac{3^4 - 2^4 - (2-3)^4}{2(2^2 + 3(-1)^2) - 3 \cdot 5} =$ -64

11. Evaluate each of the following expressions if $a = 2$ and $b = -5$.
    a) $ab - a + 2b - 2 =$ -24 b) $(a+2)(b-1) =$ -24

12. Solve each of the following equations. Make sure to check your solutions.

a) $(-2)x = -18$ 9

b) $3a - 11 = 10$ 7

c) $\frac{2x}{7} = -2$ -7

d) $2 - 3x = -10$ 4

