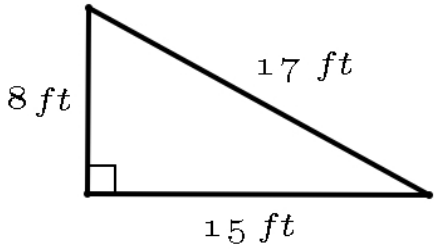
1. Which of the following numbers is NOT a prime?

$$7,\ 13,\ 37,\ 57,\ 73,\ 101$$

2. Consider the right triangle shown on the picture below.
   a) Compute the perimeter of the triangle. Include units in your computation and answer.
   b) Compute the area of the triangle. Include units in your computation and answer.



3. Perform the following divisions. Express your answer by giving the quotient and the remainder. For example, $38 \div 5 = 7$ R 3.

   a) $43 \div 8$
   b) $2012 \div 7$

4. Perform the following operations as indicated. Show all steps.

   a) $|2| + |-7|$
   b) $|2 + (-7)|$
   c) $-|-5|$
   d) $(-3)^2$
   e) -3^2
   f) $-2 - \dfrac{-20}{-4}$
   g) $\dfrac{(-2)(-5)^2}{2^2 - (-2)^2}$
   h) $-2^2 - (-2)^3 - (-2)^4$
   i) $-(-5)^2 - 3(-2)$

5. Perform the following operations as indicated. Show all steps.

   a) $-2 - 5 + (-2)(-5) + (-2) - (-5)$
   b) $3\left(-2^2\right) - \left(7 - 3 + \left(3(-4) - 2\left(-2^4 - 3(-5)\right)\right)\right)$
   c) $\dfrac{3^4 - 3^3 + 3^2 - 3^1}{2^4 - 2^3 + 2^2 - 2^1}$
   d) $120 \div 6 \cdot 2 - \Big(6(-2)^2 - \left(-5^2 - 3(-7)\right)\Big)$

6. Let $x = 2$, $y = 5$, and $z = 6$. Evaluate each of the following expressions.

   a) $z^2 - 2x + 3y$
   b) $\dfrac{(z - x) + (y + 1)}{(z - x) - (y - 1)}$
   c) $x^2 x^3$
   d) $\left(x^2\right)^3$
   e) $\dfrac{z^2 - x^2}{(z - x)^2}$
   f) $\dfrac{3xy^2 + 5(z - y)^2 - z - y}{xz - y - 1}$

7. Evaluate the expression $\dfrac{2x^2 - 11x - 21}{2x + 3}$ if $x = -5$.