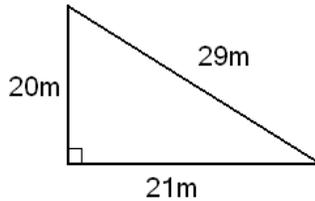1. Is 701 a prime number?

2. Consider the right triangle shown on the picture below.

   (a) Find the perimeter of the triangle.

   (b) Find the area of the triangle.

3. The points $A(-1, 4)$, $B(-1, 7)$, $C(7, 7)$ and $D(7, 4)$ determine a rectangle.

   (a) Plot these points on a coordinate system. Draw the rectangle.

   (b) Find the perimeter of the rectangle.

   (c) Find the area of the rectangle.

4. Consider the numbers 280 and 216.

   (a) Find the least common multiple of the numbers.

   (b) Find the greatest common factor of the numbers.

5. Simplify each of the following expressions. Show all steps.

   (a) $\left|(-3)^3 + 4(5)\right| - \left|(-2)(-5) - 12\right| - (-5)\left|(-1)^4 - 3\right| =$

   (b) $\dfrac{-3(-2 - 3 - 4)}{-(-3 + 2)} + \dfrac{17 - 3^3}{14 - 4^2} =$

6. Evaluate the expression $-16t^2 + 5t + 4$ if

   (a) $t = 0$

   (b) $t = 1$

   (c) $t = 2$

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

   (a) $2x + 7 = 3(x - 4)$

   (b) $\dfrac{5x + 1}{4} = -1$

   (c) $\dfrac{x}{7} - 1 = 10$

8. The difference between two numbers is 31, their sum is 23. Find these numbers.

9. One side of a rectangle is 7 in shorter than twice the other side. Find the length of the sides if the perimeter of the rectangle is 52 in.

10. The age of a father is 5 more than three times his son's age. The sum of their ages is 49. How old are they?

11. The distance between town A and town B is 200 miles. A car travels from A to B in four hours. Find the average velocity of the car.

12. How far do we get if we travel 2 hours with an average velocity of 45 $\dfrac{\text{mi}}{\text{h}}$ (miles per hour), and then travel additional 3 hours with an average velocity of 55 $\dfrac{\text{mi}}{\text{h}}$. (miles per hour)?

13. How long does it take to travel 1200 miles with an average velocity of 48 $\dfrac{\text{mi}}{\text{h}}$?