

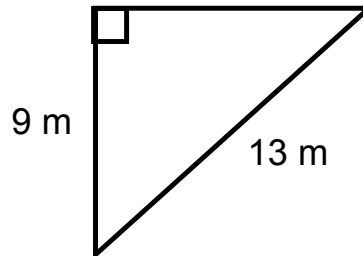
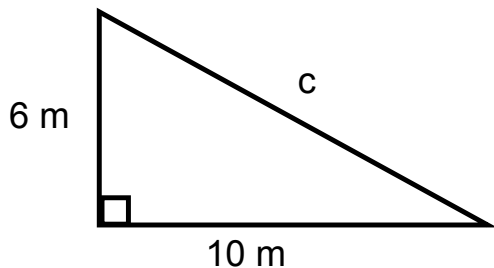
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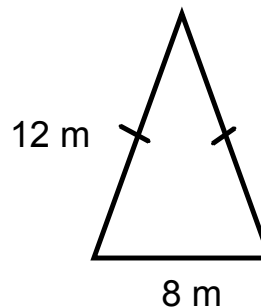
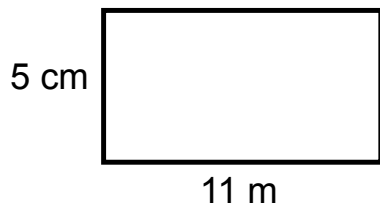
### Bell Work

Today you need to recall previously learned stuff! Take some time to do this and then check your answers!

- 1) Find the missing side length in each of the following triangles.



- 2) Find the area of each of the figures shown below.



Date: \_\_\_\_\_

### 4.3 Solving Equations with Fractions

What operation do fractions represent? What is the 'opposite operation' to a fraction?

What do you think that we should do to solve the proportion equation below?

$$\frac{x}{9} = \frac{5}{4}$$

How can we solve  $\frac{x-3}{3} = \frac{2x+1}{2}$  ?

#### A Quick Fraction Review:

- When we multiply fractions, we multiply straight across (numerator with numerator, denominator with denominator).
- The denominator of a whole number is **one**.
- Fractions should ALWAYS be reduced to lowest terms.

#### Practice:

$$\frac{2}{5} \times \frac{3}{4}$$

$$-12 \times \frac{3}{4}$$

$$15 \times \frac{4}{5}$$

We can reduce fractions to lowest terms BEFORE we multiply by cancelling common factors out from the numerator of one term and the denominator of the other.

$$\text{ex/ } 10 \times \frac{3}{5}$$

To solve equations with fractions:

- Multiply both sides by the lowest common denominator for all fractions in the equation.
- Expand and simplify both sides as much as possible.
- Use the balance method/opposite operations to isolate your unknown.
- Check your answer.

Example: Solve the following equation. Check your solution.

$$\frac{1}{4}(x - 5) = \frac{2}{5}(x + 3)$$



Practice Problems:

1a)  $\frac{5}{8}(2x - 1) = \frac{3}{4}$

b)  $\frac{2}{3}(2x - 7) + 1 = \frac{1}{2}(x + 1)$

c)  $\frac{5x - 2}{2} = \frac{2x + 1}{4} - \frac{x}{3}$

- 2) A right triangle has a base length of 9 cm and its area is 27 cm<sup>2</sup>. What is the perimeter of the triangle?

