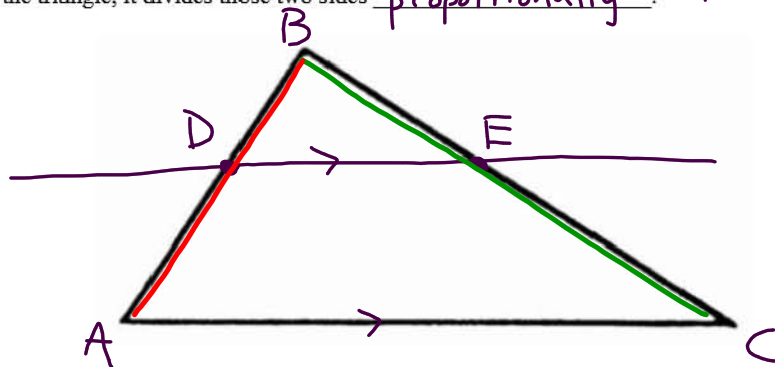


Geometry CC – Mr. Valentino
 Unit 6 Lesson 3: Side Splitter Theorem

Name: _____
 Date: _____ Period: _____

Similarity – The Side Splitter!

SIDE SPLITTER THEOREM: if a line intersects two sides of a triangle and is parallel to the third side of the triangle, it divides those two sides proportionally.

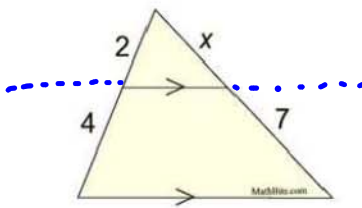


$$\frac{BD}{DA} = \frac{BE}{EC}$$

Let's practice!

1.

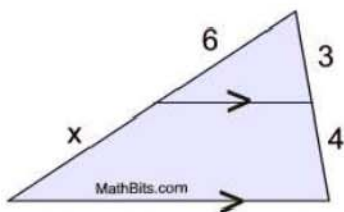
Find x.



$$\frac{2}{4} = \frac{x}{7}$$

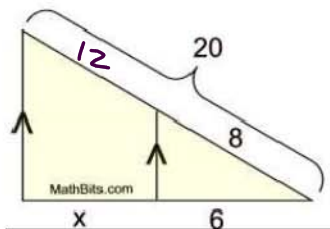
$$\begin{aligned} 4x &= 14 \\ \frac{4x}{4} &= \frac{14}{4} \\ x &= 3.5 \end{aligned}$$

2. Solve for x.



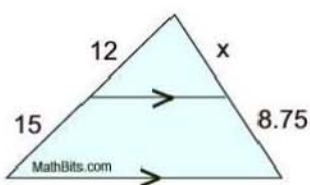
$$\begin{aligned} \frac{6}{x} &= \frac{3}{4} \\ 3x &= 24 \\ \frac{3x}{3} &= \frac{24}{3} \\ x &= 8 \end{aligned}$$

3. Solve for x.

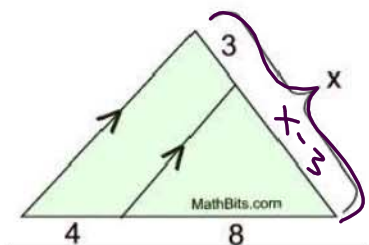


$$\frac{x}{6} = \frac{12}{8}$$

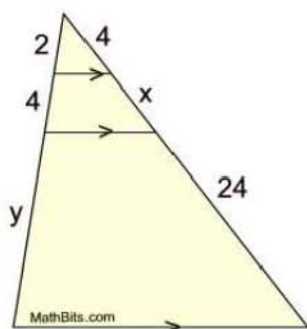
4. Solve for x.



5. Solve for x.



6. Solve for x and y.



$$\frac{2}{4} = \frac{4}{x}$$