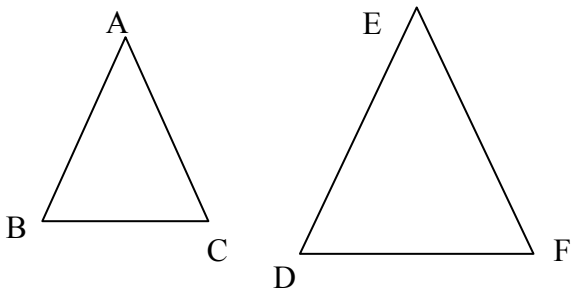
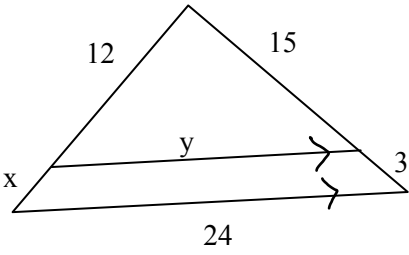
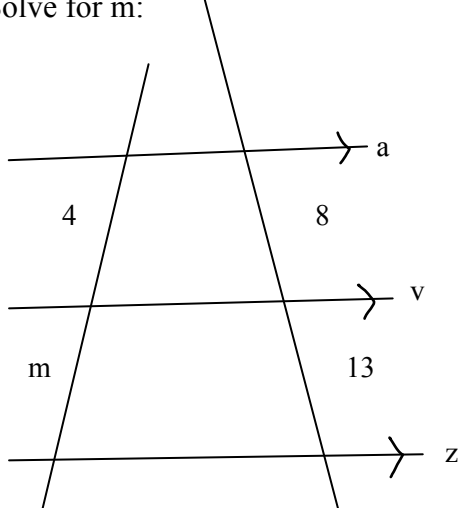
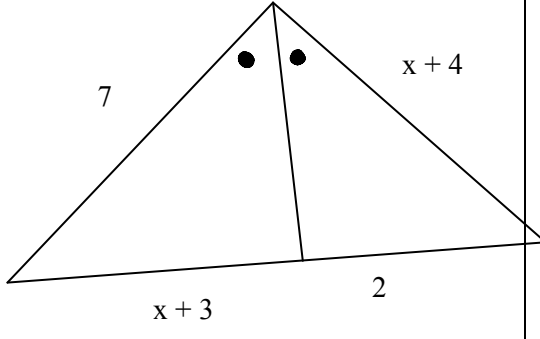


What are we learning in the Similar Polygons Chapter 8?

**Please indicate how you feel about the required topics in this unit. **

Objective	Example	Answer	Rating
Solve proportions using the Means Extremes Product Theorem	Solve for x: $\frac{2x+1}{x-5} = \frac{x-1}{x-2}$	$x = \frac{-3 \pm \sqrt{37}}{2}$	☺ ☹ ☹
Calculate the geometric mean or the mean proportional between two numbers	Calculate the geometric mean between 56 and 42.	$\pm 28\sqrt{3}$	☺ ☹ ☹
Calculate the arithmetic mean between two numbers	Calculate the arithmetic mean between 20 and 37.	28.5	☺ ☹ ☹
Use slope to find other points on a line	The point (-2,6) is on a line with a slope of -1/4. What is another point on the line?	Answers vary, but an example would be (2,5) or (6,4).	☺ ☹ ☹
Find the ratio of x to y	Find the ratio of x to y in the equations: a. $3(x - 2y) = 5(2x + 6y)$ b. $gx + 3hy = fx - 2zy$	a. $\frac{x}{y} = \frac{-36}{7}$ b. $\frac{x}{y} = \frac{-2z - 3h}{g - f} = \frac{2z + 3h}{f - g}$	☺ ☹ ☹
Prove triangles similar	See book pg. 341 Problem 3		☺ ☹ ☹
Extensions of similar triangles	See book pg. 347 Problem 3		☺ ☹ ☹
Understand similar figure correspondence	<p>Triangles ABC and EDF are similar and the side lengths are in the ratio of 2:3. The measure of $\angle A = (6x + y + 3)^\circ$, $\angle E = (2x + 3y + 5)^\circ$, $AB = 2y - x$ and $ED = 3x + y - 5$. Calculate the measure of AB.</p> 	AB = 16	☺ ☹ ☹

<p>Use similar triangles in application problems</p>	<p>You observe a tree casting a shadow. A flagpole that is 4 meters from the tree cast a 28 meter shadow. If the flagpole was 24 meters high, how tall was the tree if it is taller than the flagpole?</p>	$\frac{192}{7} \text{ meters}$	<p>☺ ☹ ☹</p>
<p>Understand the relationships between perimeter, area, and volume in similar figures</p>	<p>The ratio of the sides of two similar figures is $\frac{2}{5}$. What are the ratios of the perimeters, areas, and volumes of the figures?</p>	$R_P = \frac{2}{5}$ $R_A = \frac{4}{25}$ $R_V = \frac{8}{125}$	<p>☺ ☹ ☹</p>
<p>Apply the Side-Splitter Theorem</p>	<p>Solve for x and y:</p> 	$x = 2.4$ $y = 20$	<p>☺ ☹ ☹</p>
<p>Apply the Side-Splitter Corollary</p>	<p>Solve for m:</p> 	$m = 6.5$	<p>☺ ☹ ☹</p>
<p>Apply the Angle Bisector Theorem</p>	<p>Solve for x:</p> 	$x = \frac{-7 + \sqrt{57}}{2}$ <p>(reject the - case since it would make the side length negative)</p>	<p>☺ ☹ ☹</p>

