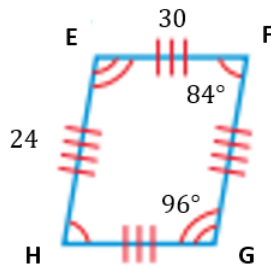
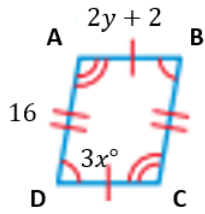


1) If quadrilateral $ABCD \sim$ quadrilateral $EFGH$ then find the following:



$x =$ 28

$y =$ 9

$AB =$ 20

2) A building casts a 270 ft shadow. A 6 ft tall man casts a shadow measuring 9 ft. What is the height of the building? Draw a diagram with similar triangles.

Building = 180 ft.

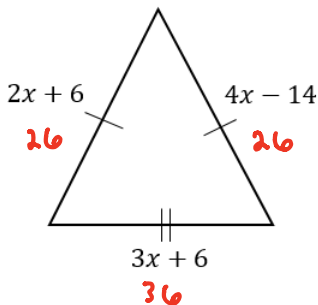
3) An equilateral triangle $\triangle ABC$ has the following lengths. $AB = 2x + 18$; $BC = 7x - 17$; $AC = 4x + 4$. Find the value of x and the three sides.

$x = 7$ $AB = 32$

$BC = 32$

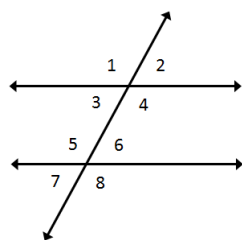
$AC = 32$

4) Find the value of x and the side lengths of the following triangle:



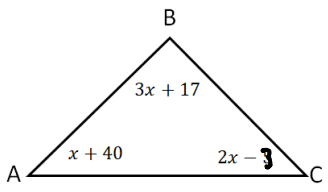
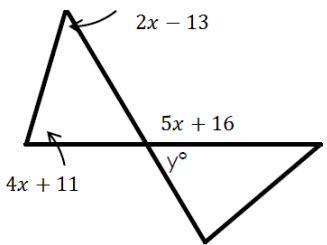
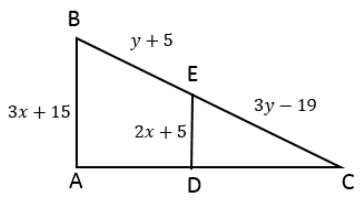
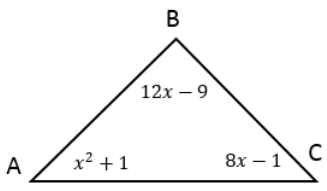
$x = 10$

5) List all of the angles that meet the relationship. Then determine the value of each angle given that the $m\angle 1 = 130^\circ$

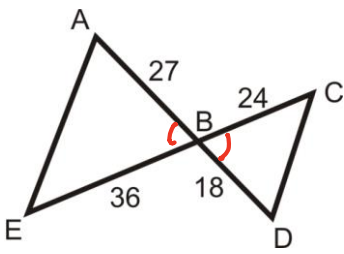
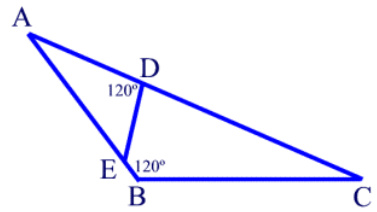
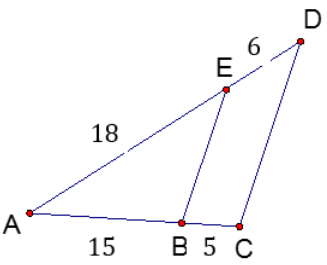
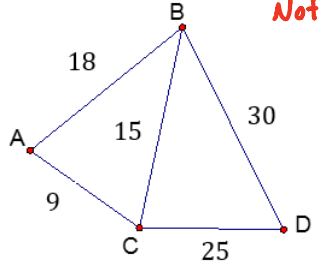
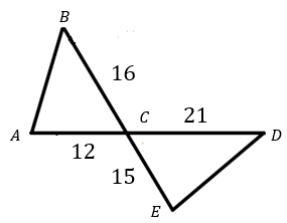


Vertical: $\frac{\angle 1 + \angle 4}{\angle 5 + \angle 8}$ $\frac{\angle 2 + \angle 3}{\angle 6 + \angle 7}$
 Corresponding: $\frac{\angle 1 + \angle 5}{\angle 7 + \angle 3}$ $\frac{\angle 2 + \angle 6}{\angle 8 + \angle 4}$
 Alternate Interior: $\angle 3 + \angle 6$ $\angle 4 + \angle 5$
 Alternate Exterior: $\angle 1 + \angle 8$ $\angle 2 + \angle 7$
 Linear Pairs: $\frac{\angle 1 + \angle 2}{\angle 7 + \angle 8}$ $\frac{\angle 3 + \angle 4}{\angle 6 + \angle 7}$ $\frac{\angle 5 + \angle 6}{\angle 8 + \angle 1}$

$m\angle 1 = 130^\circ$ $m\angle 5 = 130^\circ$
 $m\angle 2 = 50^\circ$ $m\angle 6 = 50^\circ$
 $m\angle 3 = 50^\circ$ $m\angle 7 = 50^\circ$
 $m\angle 4 = 130^\circ$ $m\angle 8 = 130^\circ$

<p>6) Find x and the measures of each angle</p>  <p> $x = \underline{21}$ $m\angle A = \underline{61}$ $m\angle B = \underline{80}$ $m\angle C = \underline{39}$ </p>	<p>7) Find x and y</p>  <p> $x = \underline{18}$ $y = \underline{74}$ </p>
<p>8) D and E are midpoints. Find the following:</p>  <p> $x = \underline{5}$ $AB = \underline{30}$ $DE = \underline{15}$ $y = \underline{12}$ </p>	<p>9) Find x and the measures of each angle</p>  <p> $x = \underline{7}$ $m\angle A = \underline{50^\circ}$ $m\angle B = \underline{75^\circ}$ $m\angle C = \underline{55^\circ}$ </p>

Determine if the triangles are similar. If yes, make a similarity statement and give the reason why they are similar. If they are not similar, write "not similar".

<p>10) $\triangle AEB \sim \triangle \underline{CDB}$ by \underline{SAS}</p> 	<p>11) $\triangle ABC \sim \triangle \underline{ADE}$ by \underline{AAS}</p> 
<p>12) $\triangle ABE \sim \triangle \underline{ACD}$ by \underline{SAS}</p> 	<p>13) $\triangle ABC \sim \triangle \underline{\hspace{2cm}}$ by $\underline{\hspace{2cm}}$</p> <p><i>Not Similar</i></p> 
<p>14) $\triangle ABC \sim \triangle \underline{\hspace{2cm}}$ by $\underline{\hspace{2cm}}$</p> <p><i>Not Similar</i></p> 	<p>15) $\triangle ABC \sim \triangle \underline{\hspace{2cm}}$ by $\underline{\hspace{2cm}}$</p> <p><i>Not Similar</i></p> 