|	
I can use similar figures properties to solve for a variable or missing angle.	**I can prove similarity of two triangles using the triangle similarity postulates**

I can use similar figures properties to solve for a variable or missing angle.

Given the following calculate the value of x and y. Show complete work
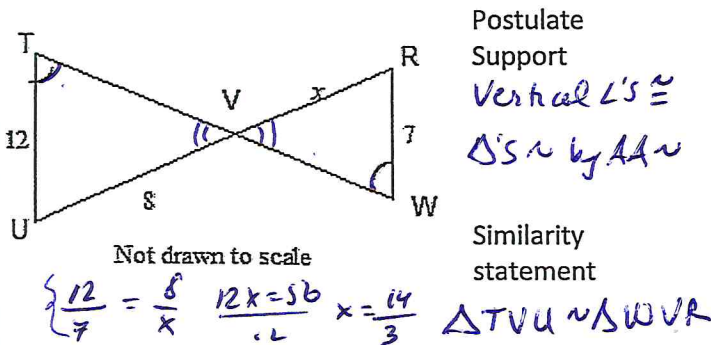
Find the values of the variables.

$\triangle WLJ \sim \triangle QBV$

$2x = 120$

$x = 60$

$y + 120 + \frac{\overset{30}{60}}{2} + 5 = 180$

$y + 155 = 180 \quad y = 25$
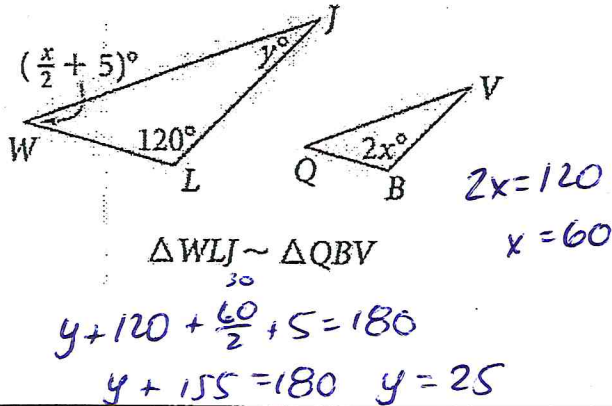
I can prove similarity of two triangles using the triangle similarity postulates

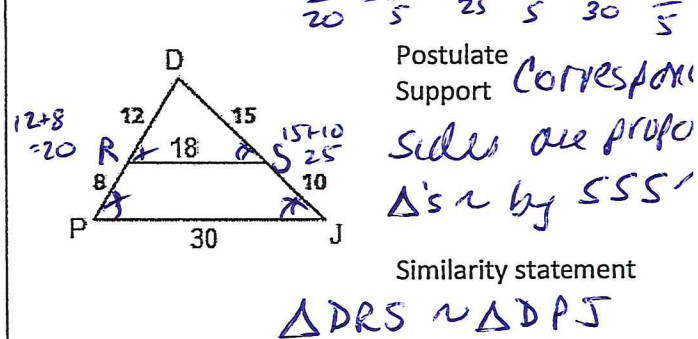Postulate Support Vertical ∠'s ≅ $\frac{4}{6} = \frac{2}{3}$ Sides prop.
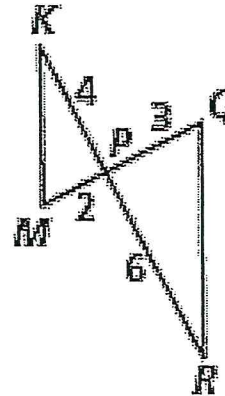
Similarity statement

$\triangle KPM \sim \triangle RPQ$

by SAS ~

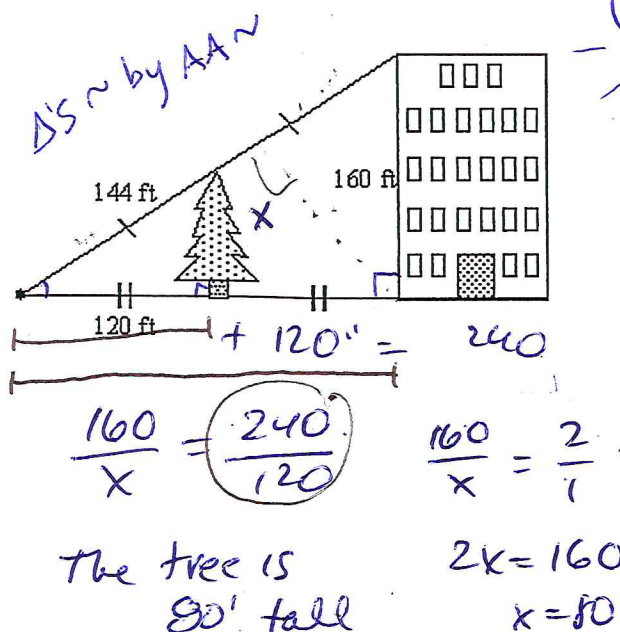**I can prove similarity of two triangles using the triangle similarity postulates**

Not drawn to scale

Postulate Support

Vertical ∠'s ≅

∆'s ~ by AA~

Similarity statement

$\frac{12}{7} = \frac{8}{x}$ $12x = 56$ $x = \frac{14}{3}$ $\triangle TVU \sim \triangle WVR$

I can prove similarity of two triangles using the triangle similarity postulates

$\frac{12}{20} = \frac{3}{5}$ $\frac{15}{25} = \frac{3}{5}$ $\frac{18}{30} = \frac{3}{5}$

$12+8 = 20$

Postulate Support Correspon...

Sides are propo...

∆'s ~ by SSS'

Similarity statement

$\triangle DRS \sim \triangle DPJ$

Applications of similar triangles: I can use properties of similar triangles to determine indirect measures.

Use the information in the diagram to determine the height of the tree to the nearest foot.

∆'s ~ by AA~

$+ 120" = 240$

$\frac{160}{x} = \frac{240}{120}$ $\frac{160}{x} = \frac{2}{1}$

The tree is 80' tall

$2x = 160$

$x = 80$

Applications of similar triangles: I can use properties of similar triangles to determine missing sides

Find the value of x. ~~Round your answer to the nearest thousandths.~~

$\frac{7}{2} = \frac{9}{x}$ $\frac{7}{7+2} = \frac{9}{9+x}$ OLD

Side Splitter

$7x = 18$

$x = \frac{18}{7}$