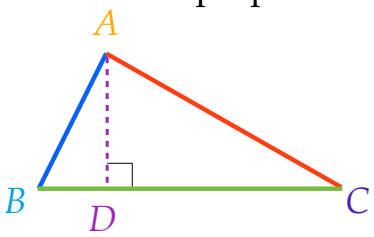
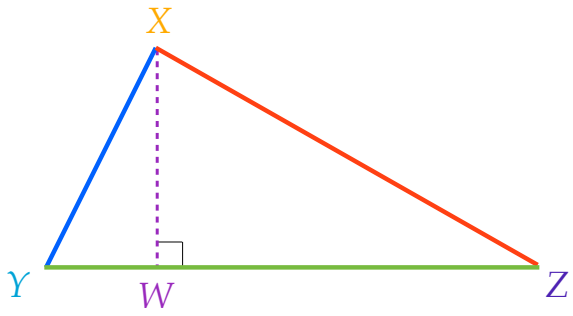
Proportional Altitudes of Similar Triangles

Name _____

Date _____ Period _____

If two triangles are similar, then the measures of the corresponding altitudes are proportional to the same measures of the corresponding sides.





If $\Delta ABC \sim \Delta XYZ$...

Proportional Sides

$$\frac{AB}{XY} = \frac{BC}{YZ} = \frac{AC}{XZ} = \frac{AD}{XW}$$

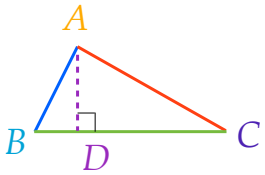
Statements	Reasons

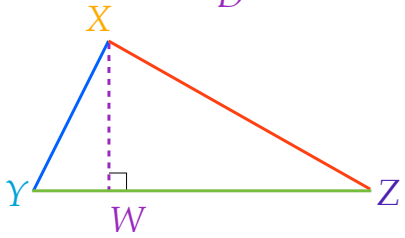
Given: $\Delta ABC \sim \Delta XYZ$

$\overline{AD}$ is an altitude of ΔABC

$\overline{XW}$ is an altitude of ΔXYZ

Prove: $\frac{AD}{XW} = \frac{AC}{XZ}$





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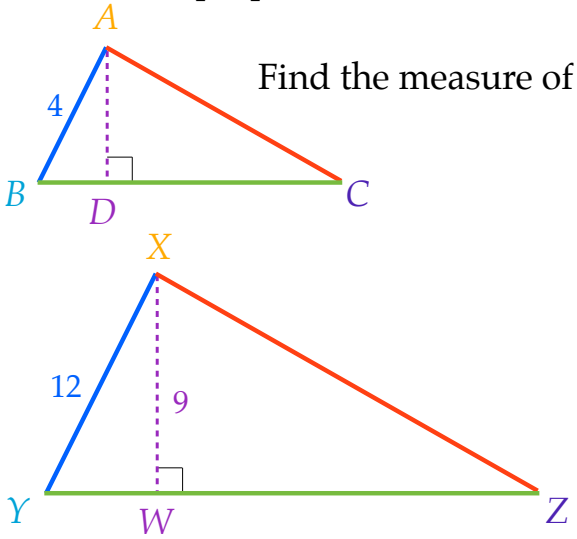

Find the measure of AD

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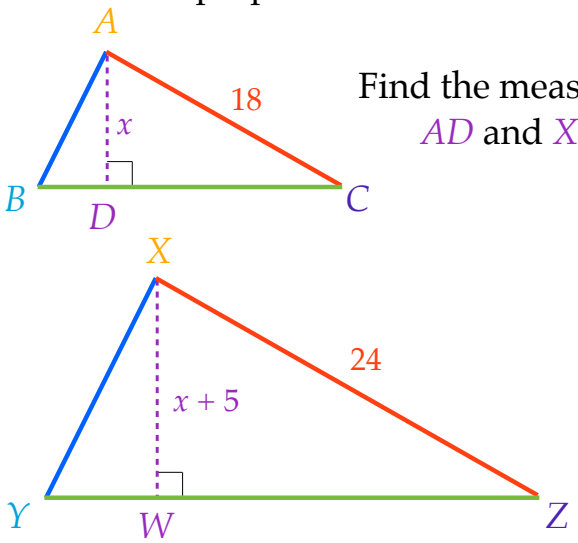
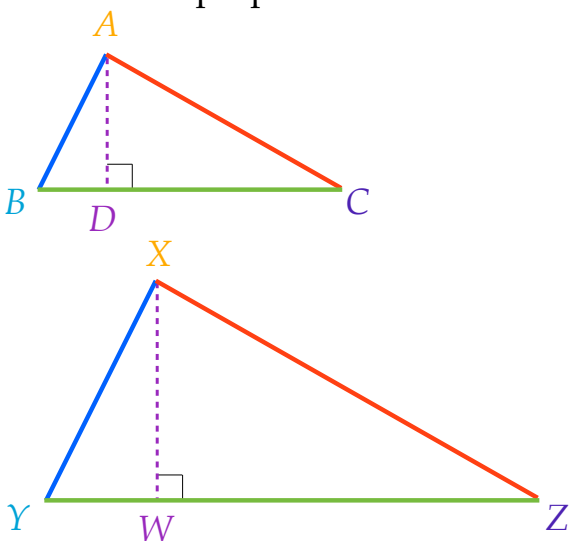


Find the measure of AD and XW

If two triangles are similar, then the measures of the corresponding altitudes are proportional to the same measures of the corresponding sides.



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Proportional Sides

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