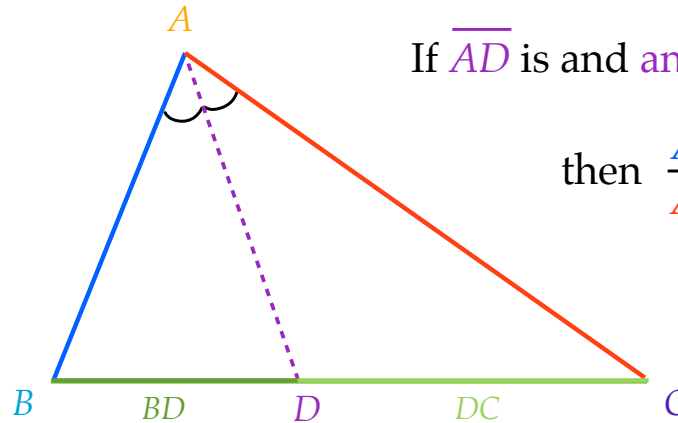


## Angle Bisector Proportionality Theorem

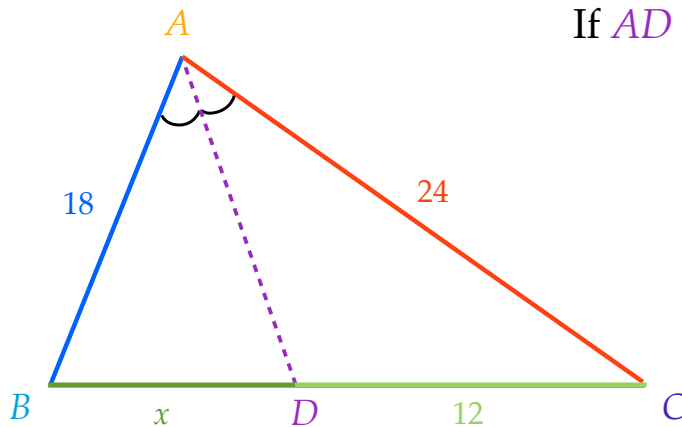
An **angle bisector** in a triangle separates the **opposite side** into segments that have the **same ratio** as the **other two sides**.



If  $\overline{AD}$  is an **angle bisector** of  $\triangle ABC$

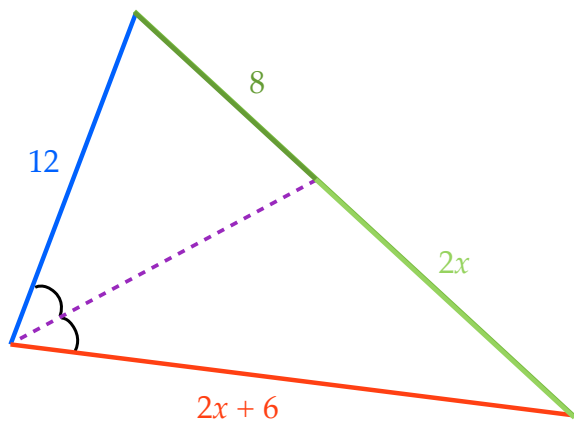
$$\text{then } \frac{AB}{AC} = \frac{BD}{DC}$$

Determine the value of  $x$ .

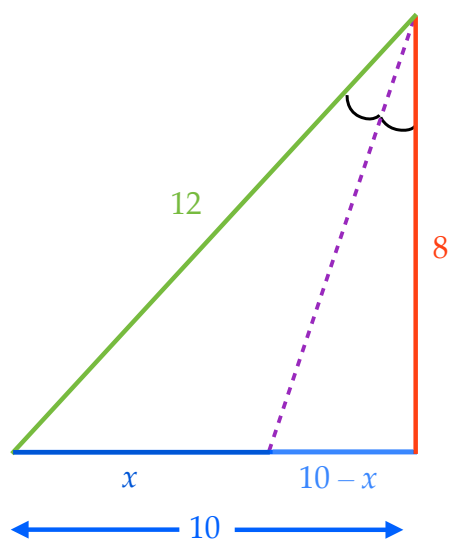


If  $\overline{AD}$  is an **angle bisector** of  $\triangle ABC$

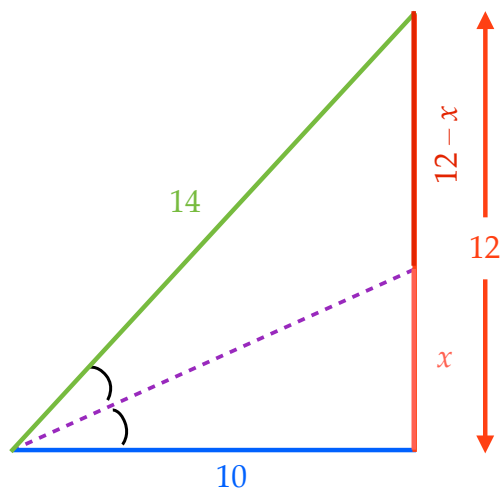
Determine the value of  $x$ .



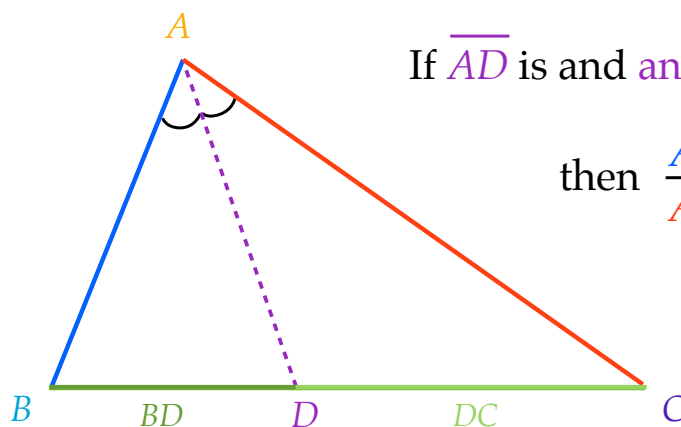
Determine the value of  $x$ .



Determine the value of  $x$ .



An **angle bisector** in a triangle separates the **opposite side** into segments that have the **same ratio** as the **other two sides**.



If  $\overline{AD}$  is an **angle bisector** of  $\triangle ABC$

$$\text{then } \frac{AB}{AC} = \frac{BD}{DC}$$