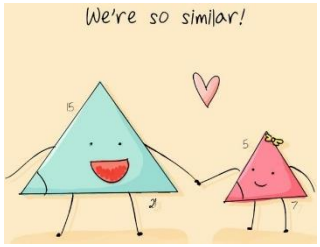
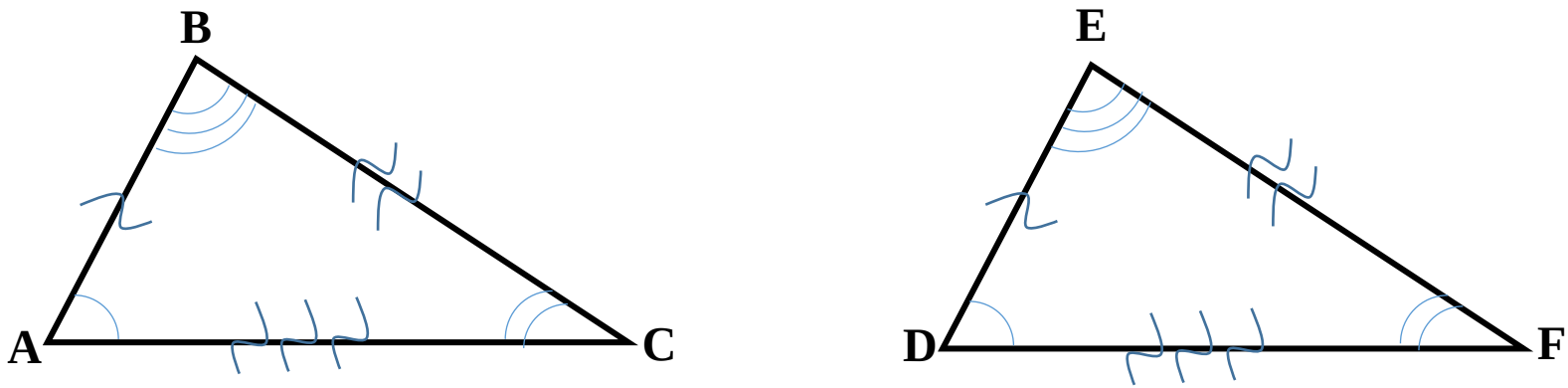


Similarity of Triangles:

Two triangles are similar if the corresponding angles are congruent, and the corresponding sides are proportional.



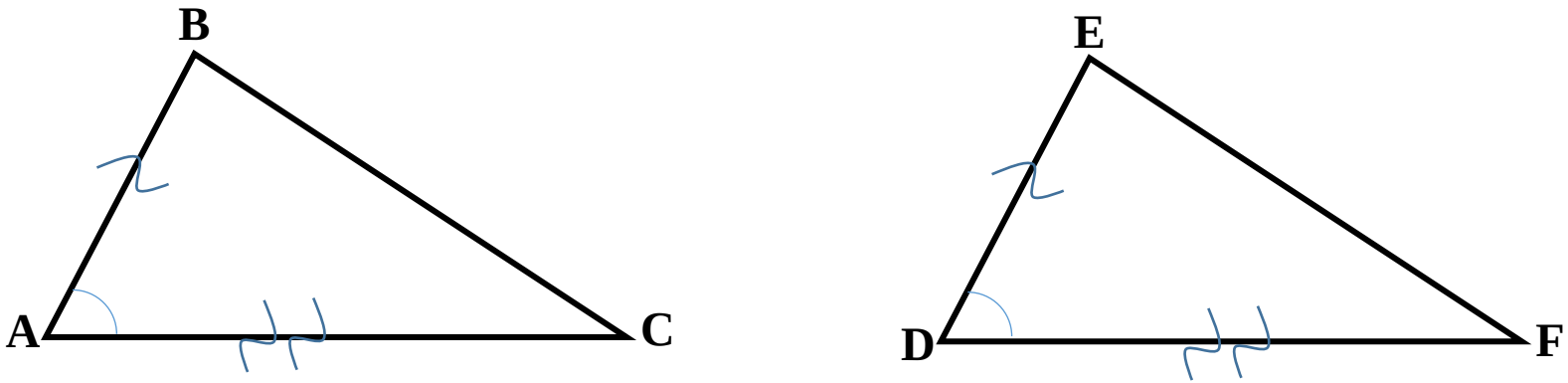
$$\Delta ABC \sim \Delta DEF$$

Congruency: $\angle A \cong \angle D,\ \angle B \cong \angle E,\ \angle C \cong \angle F$

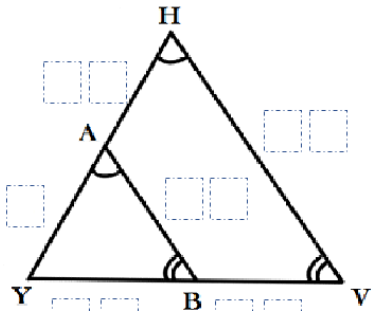
Proportionality: $\dfrac{\overline{AB}}{\overline{DE}} = \dfrac{\overline{BC}}{\overline{EF}} = \dfrac{\overline{AC}}{\overline{DF}}$

When is a fewer number of congruences/proportionalities enough to conclude that two triangles are similar?

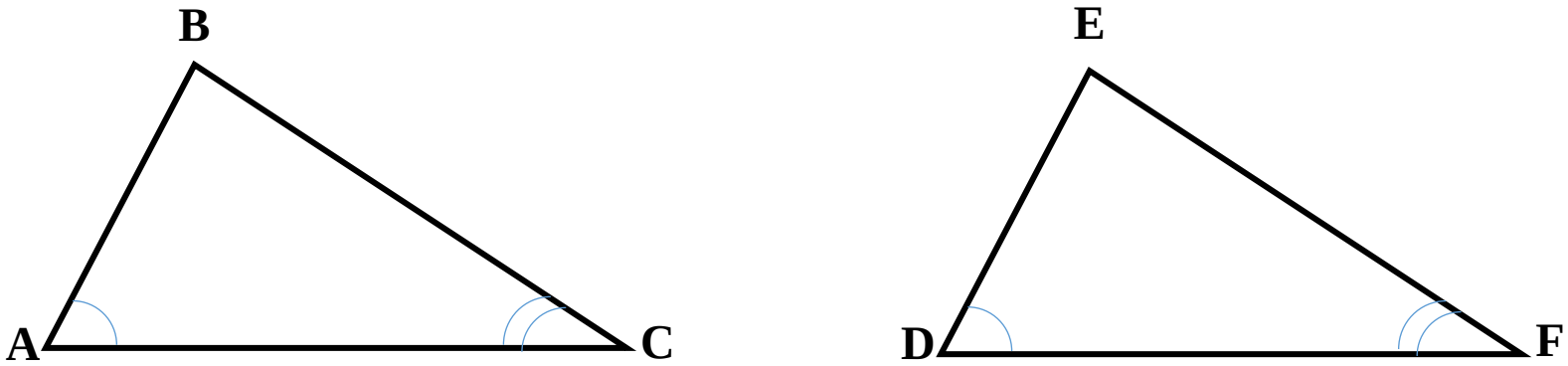
Side-Angle-Side(SAS) Similarity:



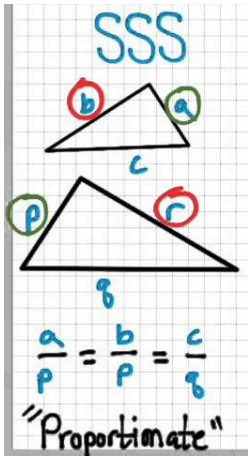
$\Delta ABC \sim \Delta DEF$



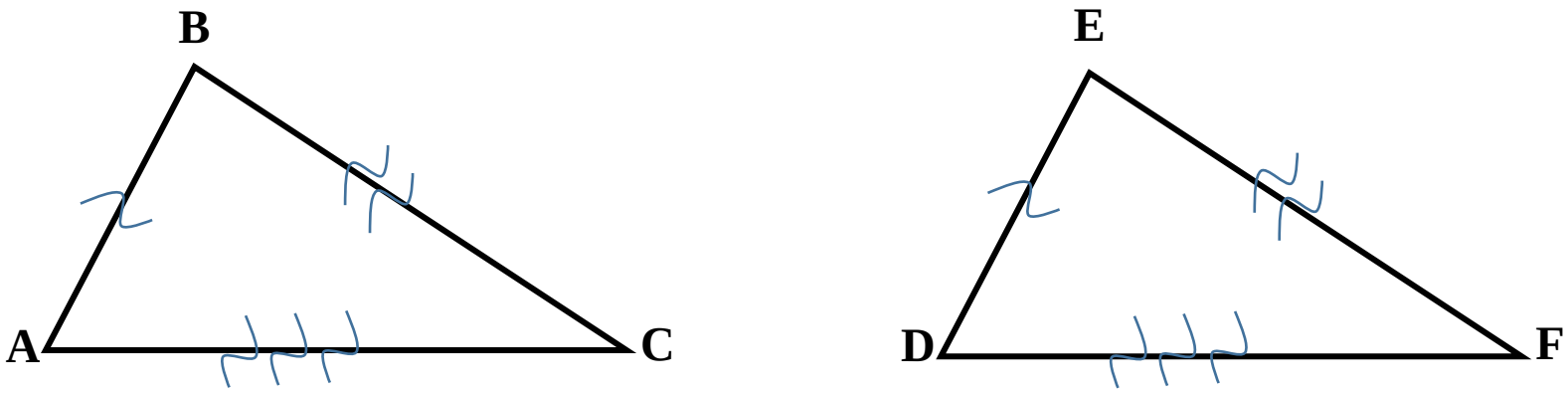
Angle-Angle(AA) Similarity:



$\Delta ABC \sim \Delta DEF$

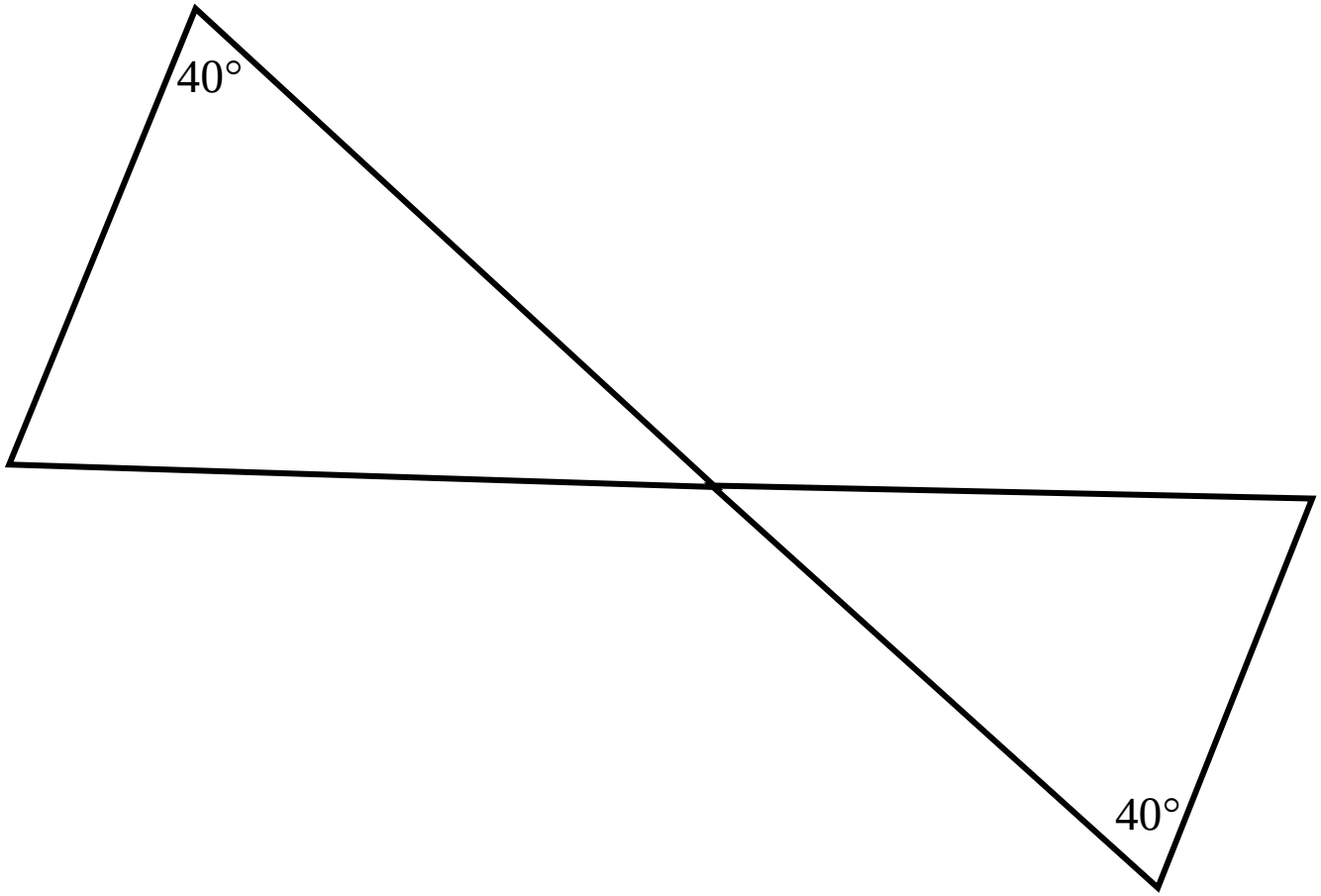


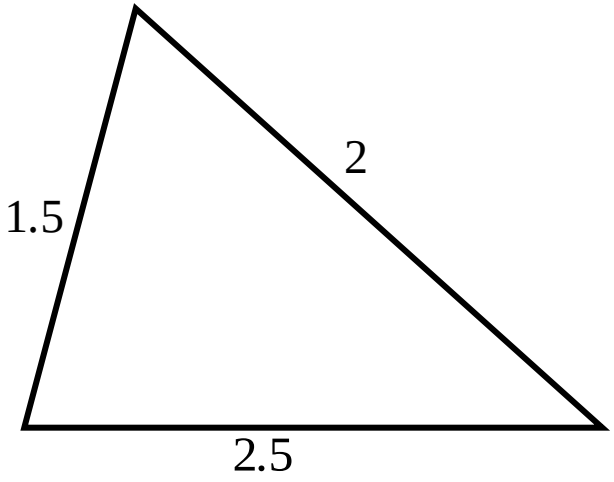
Side-Side-Side(SSS) Similarity:

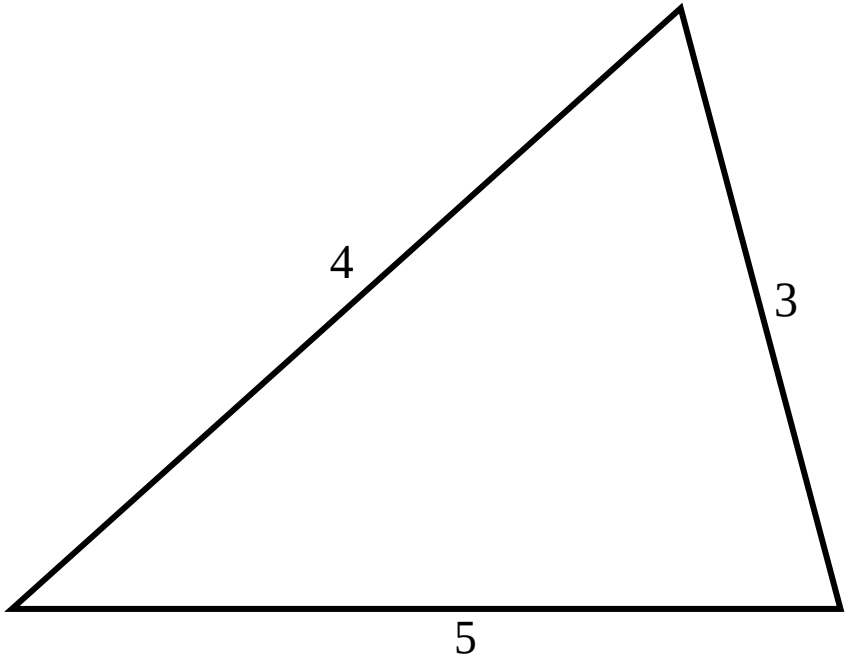


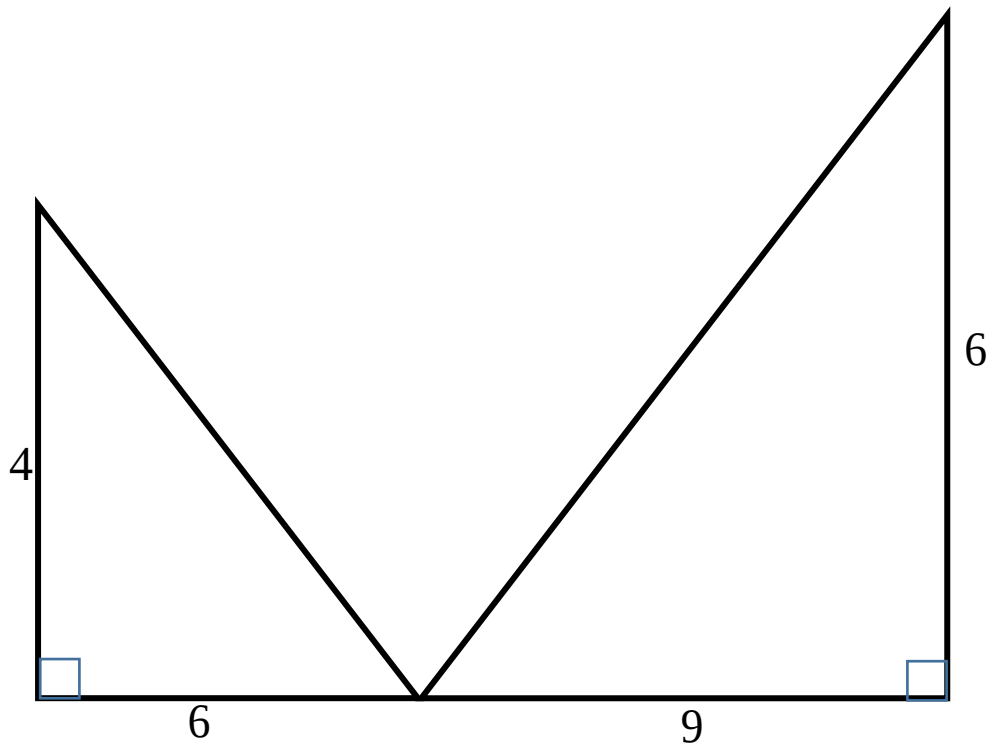
$\Delta ABC \sim \Delta DEF$

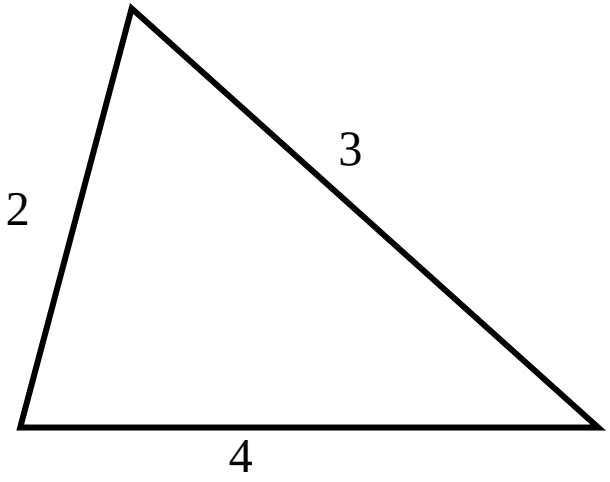
Determine if the following pairs of triangles are similar:

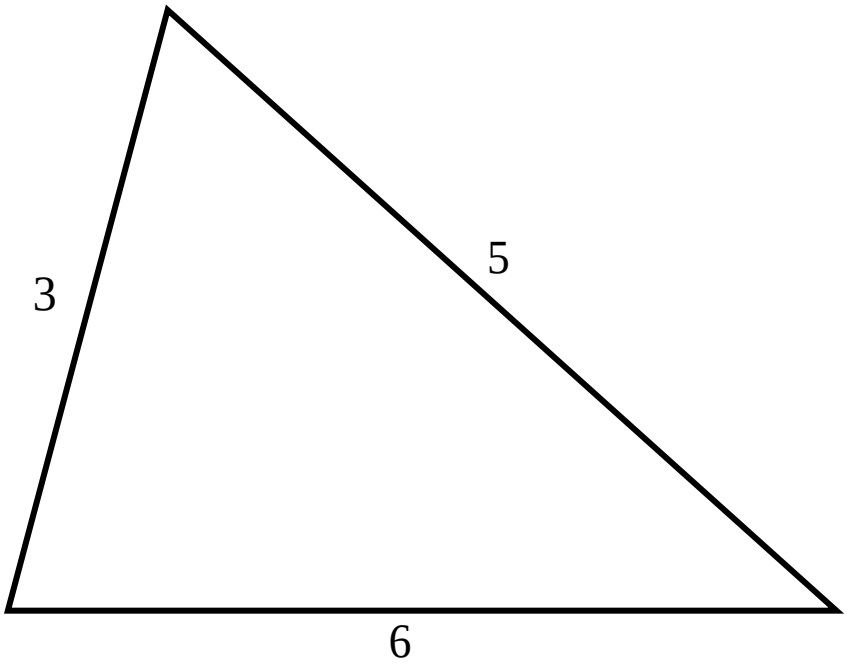



2
1.5
2.5

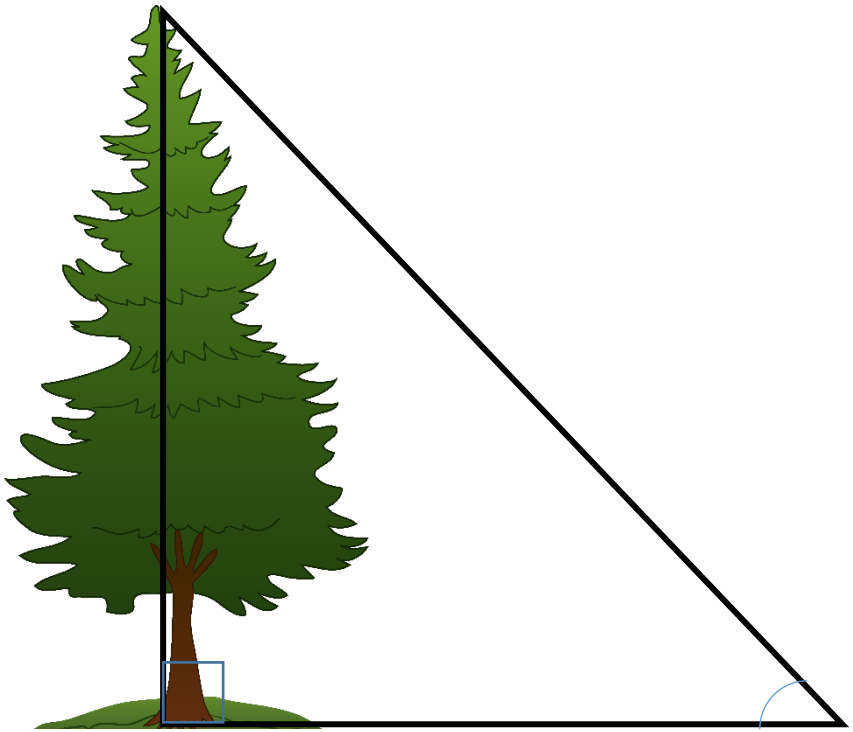

4
3
5

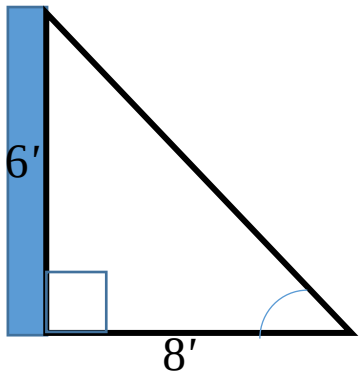

4
6
6
9

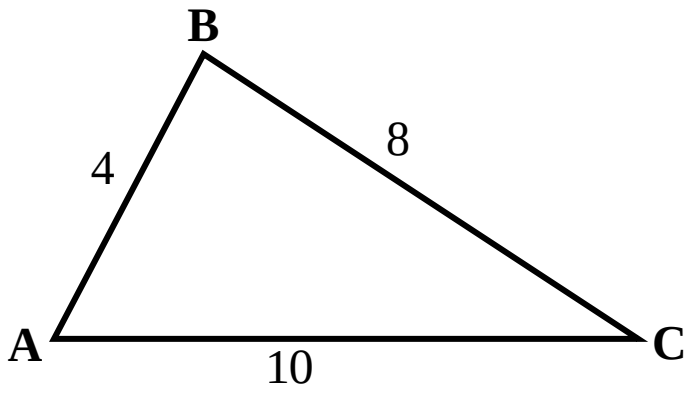
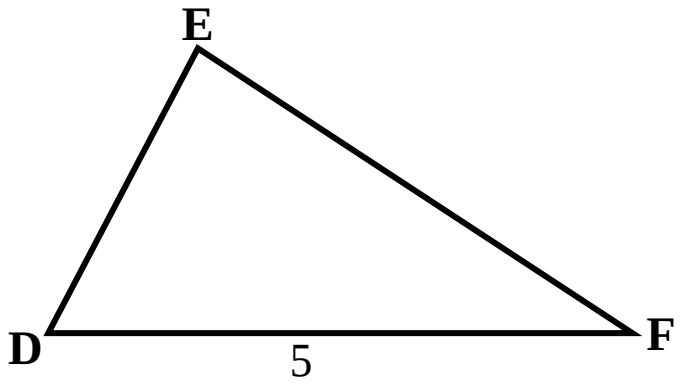

2
3
4


3
5
6

How tall is the tree?





$\Delta ABC \sim \Delta DEF$

Find the missing side measurements in ΔDEF .