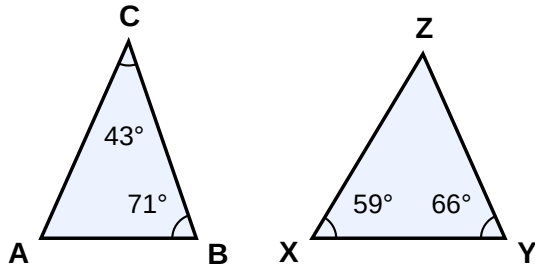


Angles and the AA test

Find the missing angle in each triangle. Then decide: are the triangles similar?

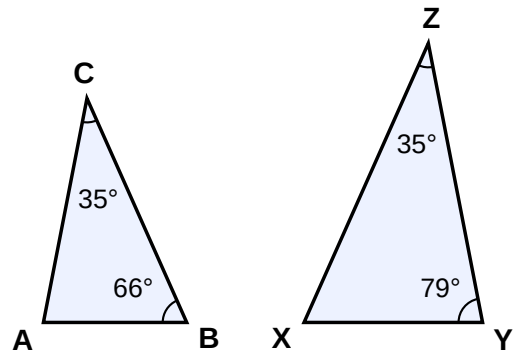
1.



$$m\angle A = \underline{\hspace{2cm}}^\circ \quad m\angle Z = \underline{\hspace{2cm}}^\circ$$

Similar?

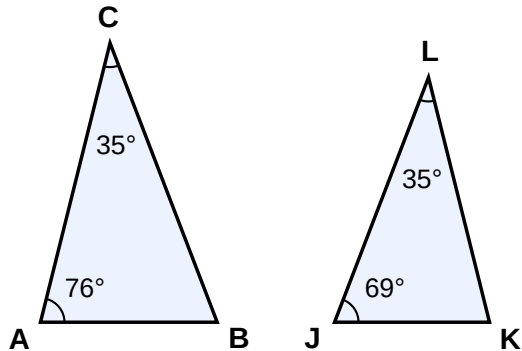
2.



$$m\angle A = \underline{\hspace{2cm}}^\circ \quad m\angle X = \underline{\hspace{2cm}}^\circ$$

Similar?

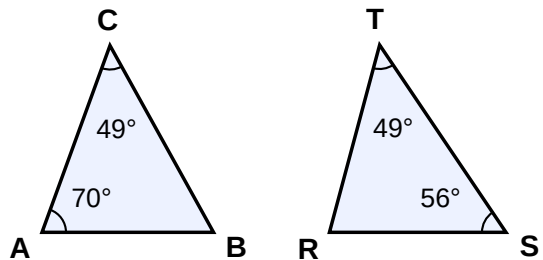
3.



$$m\angle B = \underline{\hspace{2cm}}^\circ \quad m\angle K = \underline{\hspace{2cm}}^\circ$$

Similar?

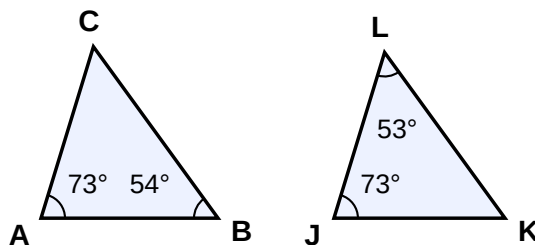
4.



$$m\angle B = \underline{\hspace{2cm}}^\circ \quad m\angle R = \underline{\hspace{2cm}}^\circ$$

Similar?

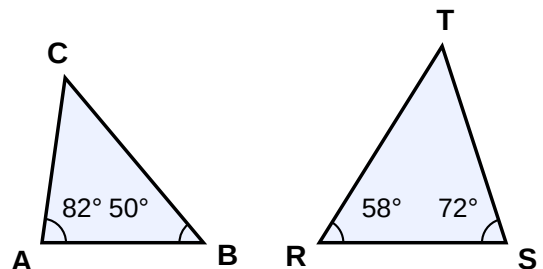
5.



$$m\angle C = \underline{\hspace{2cm}}^\circ \quad m\angle K = \underline{\hspace{2cm}}^\circ$$

Similar?

6.



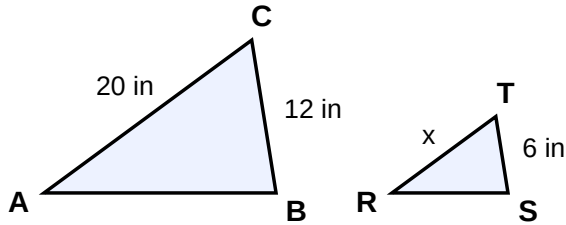
$$m\angle C = \underline{\hspace{2cm}}^\circ \quad m\angle T = \underline{\hspace{2cm}}^\circ$$

Similar?

Find a missing side

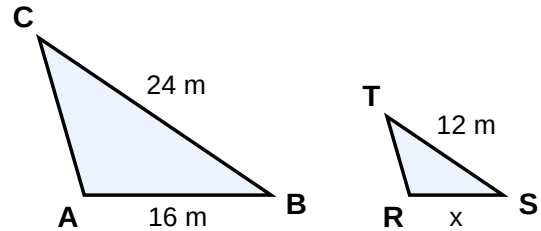
The triangles are similar. Match up the sides, then find x .

1. Triangle ABC ~ triangle RST. Find x .



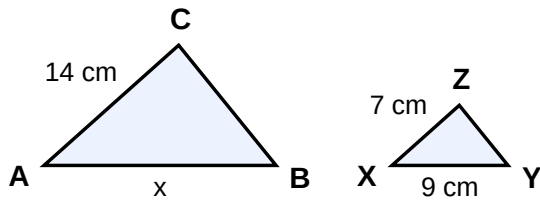
$x = \underline{\hspace{2cm}}$ in

2. Triangle ABC ~ triangle RST. Find x .



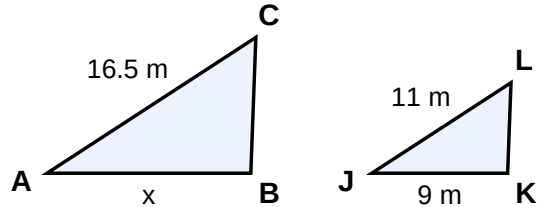
$x = \underline{\hspace{2cm}}$ m

3. Triangle ABC ~ triangle XYZ. Find x .



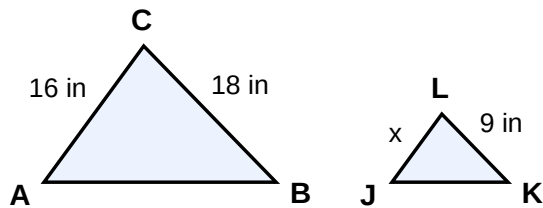
$x = \underline{\hspace{2cm}}$ cm

4. Triangle ABC ~ triangle JKL. Find x .



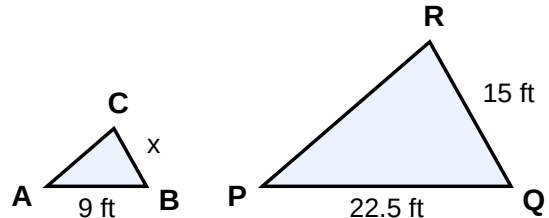
$x = \underline{\hspace{2cm}}$ m

5. Triangle ABC ~ triangle JKL. Find x .



$x = \underline{\hspace{2cm}}$ in

6. Triangle ABC ~ triangle PQR. Find x .



$x = \underline{\hspace{2cm}}$ ft

Shadow problems

An object and its shadow form a right triangle. At the same time of day these triangles are similar, so set up a proportion and solve.

1. A flagpole casts a 180-inch shadow at the same time that a student who is 55 inches tall casts a 25-inch shadow. How tall is the flagpole, in feet?
2. A 3-foot mailbox casts a 6-foot shadow. At the same time, how long is the shadow of a 64-foot water tower?

Height = _____ ft

Shadow = _____ ft

3. At the same time of day, a lamppost casts a 32-foot shadow and a 5-foot fence post casts a 10-foot shadow. How tall is the lamppost?
4. A 3-foot fence post casts a 8-foot shadow. At the same time, how long is the shadow of a 21-foot tree?

Height = _____ ft

Shadow = _____ ft

5. A water tower casts a 156-inch shadow at the same time that a student who is 55 inches tall casts a 11-inch shadow. How tall is the water tower, in feet?
6. At the same time of day, a tree casts a 22-foot shadow and a 10-foot basketball hoop casts a 11-foot shadow. How tall is the tree?

Height = _____ ft

Height = _____ ft