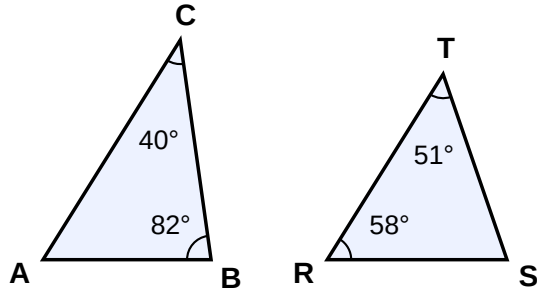


Angles and the AA test

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

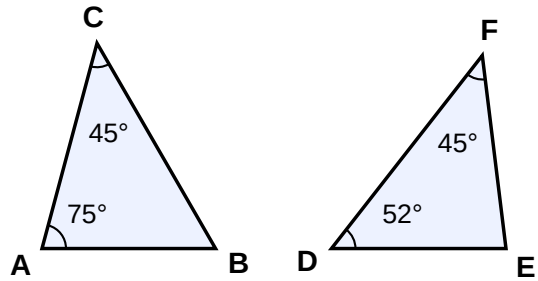
1.



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

Similar?

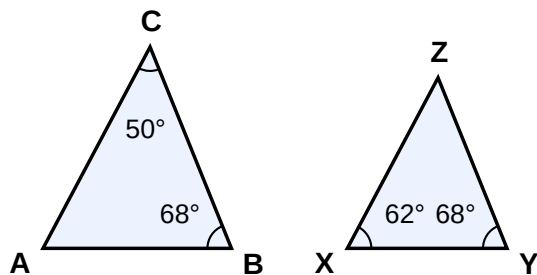
2.



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

Similar?

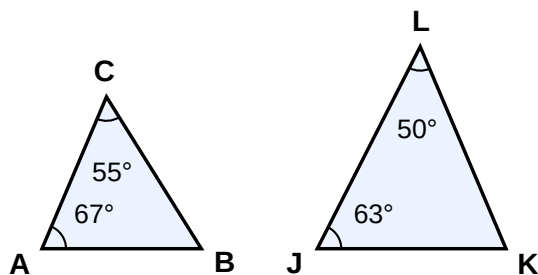
3.



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

Similar?

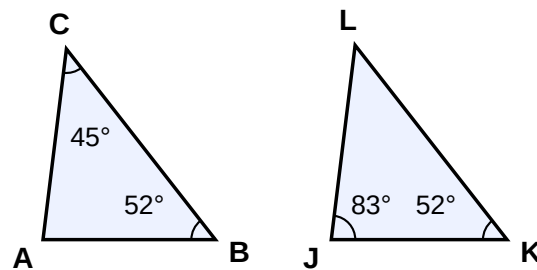
4.



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

Similar?

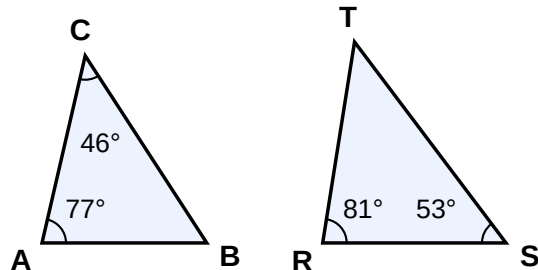
5.



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

Similar?

6.



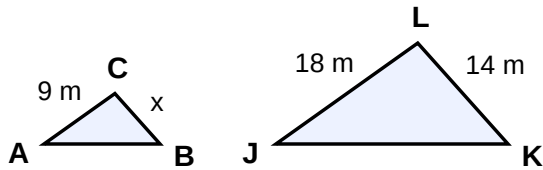
$m\angle B = \underline{\hspace{2cm}}^\circ$ $m\angle T = \underline{\hspace{2cm}}^\circ$

Similar?

Find a missing side

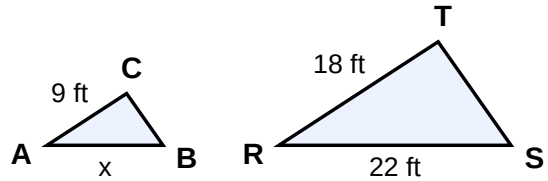
The triangles are similar. Match up the sides, then find x .

1. Triangle ABC ~ triangle JKL. Find x .



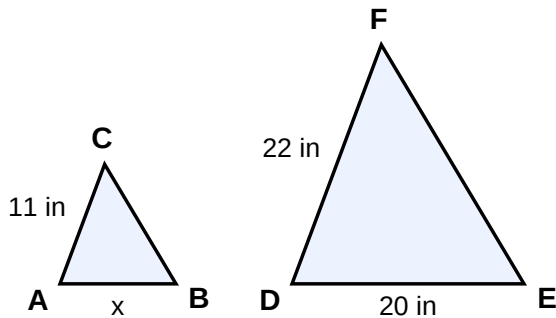
$x = \underline{\hspace{2cm}}$ m

2. Triangle ABC ~ triangle RST. Find x .



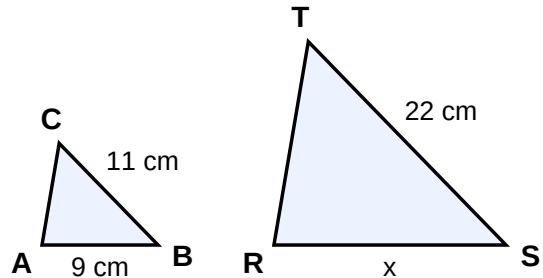
$x = \underline{\hspace{2cm}}$ ft

3. Triangle ABC ~ triangle DEF. Find x .



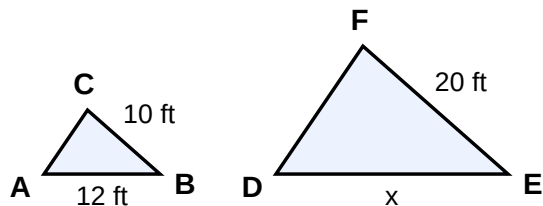
$x = \underline{\hspace{2cm}}$ in

4. Triangle ABC ~ triangle RST. Find x .



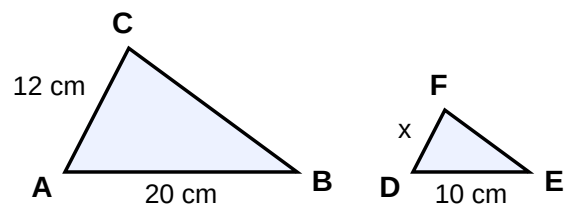
$x = \underline{\hspace{2cm}}$ cm

5. Triangle ABC ~ triangle DEF. Find x .



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

6. Triangle ABC ~ triangle DEF. Find x .



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

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. At the same time of day, a building casts a 72-foot shadow and a 3-foot fence post casts a 4-foot shadow. How tall is the building?

Height = _____ ft

2. A lamppost casts a 57-inch shadow at the same time that a student who is 52 inches tall casts a 19-inch shadow. How tall is the lamppost, in feet?

Height = _____ ft

3. A 3-foot fence post casts a 12-foot shadow. At the same time, how long is the shadow of a 53-foot tree?

Shadow = _____ ft

4. A 3-foot mailbox casts a 2-foot shadow. At the same time, how long is the shadow of a 18-foot lamppost?

Shadow = _____ ft

5. A flagpole casts a 60-inch shadow at the same time that a student who is 72 inches tall casts a 10-inch shadow. How tall is the flagpole, in feet?

Height = _____ ft

6. At the same time of day, a tree casts a 85-foot shadow and a 4-foot mailbox casts a 10-foot shadow. How tall is the tree?

Height = _____ ft