

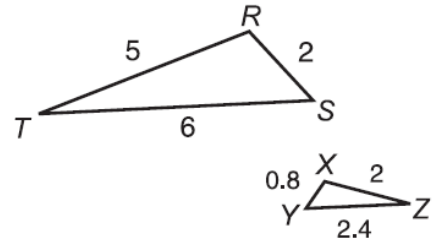
UNIT 3 TEST REVIEW

Similar Triangles:

1) In the figure, $\triangle RST \sim \triangle XYZ$.

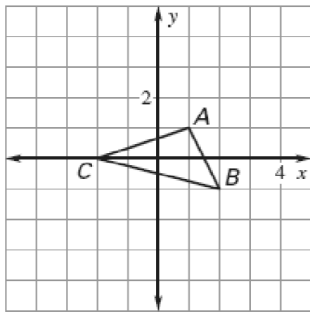
a) Find the scale factor of $\triangle RST$ to $\triangle XYZ$.

b) Find the perimeter of both triangles. What is the ratio of the perimeters of the 2 triangles?

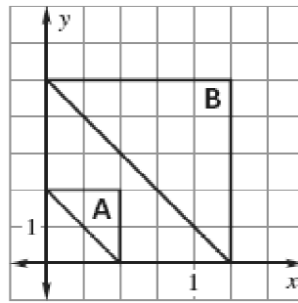


2) Dilations:

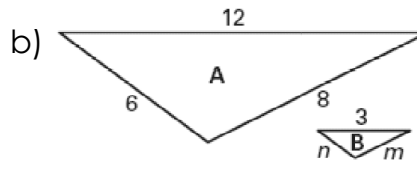
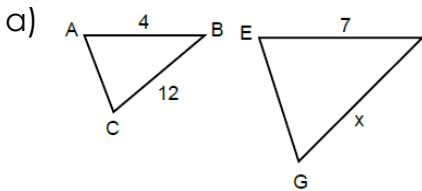
a) Draw a dilation with $k = 2$



b) Determine the scale factor, $k = \underline{\hspace{2cm}}$



3) Find the length of the missing side(s).

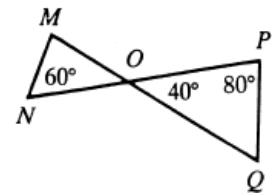
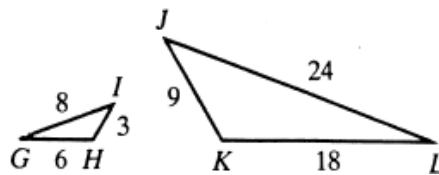
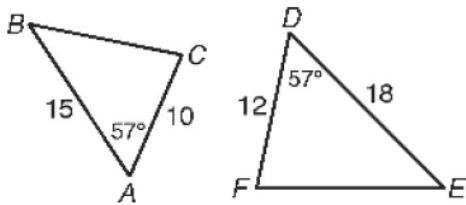


4) Determine if the following triangles are similar. If so, give the postulate and similarity statement.

a) $\triangle ABC \sim \underline{\hspace{2cm}}$ by $\underline{\hspace{2cm}}$

b) $\triangle GHI \sim \underline{\hspace{2cm}}$ by $\underline{\hspace{2cm}}$

c) $\triangle MNO \sim \underline{\hspace{2cm}}$ by $\underline{\hspace{2cm}}$

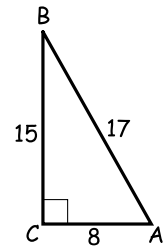


5) If a 42.9 ft tall flagpole casts a 253.1 ft long shadow, then how long is the shadow that a 6.2 ft. tall woman casts?

SOHCAHTOA:

6) a) Find the 3 trig ratios from Angle A and Angle B.

b) How do the ratios compare for the two angles?



7) Draw $\triangle CAT$ where $\angle ATC = 90^\circ$, $CA = 53$, and $CT = 28$.

a) What is the length of AT?

b) What is $\sin C$?

c) What is $\tan A$?

8) Draw $\triangle ABC$ where $\angle B = 90^\circ$ and $\sin A = \frac{12}{20}$.

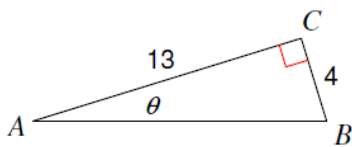
a) What is the length of AB?

b) What is $\tan A$?

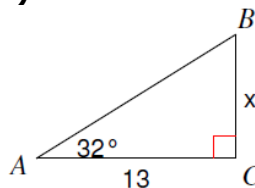
c) What is $\cos A$?

9) Solve for the missing side or angle using Trig Ratios (sin, cos, tan).

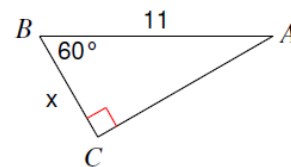
a)



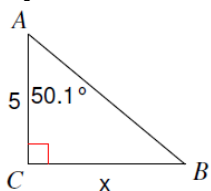
b)



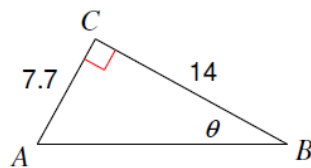
c)



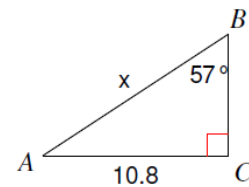
d)



e)



f)



10) An 8 foot ladder is leaning against a wall so that the base is 5 feet from the base of the wall. What angle does the ladder make with the ground? Round to the nearest tenth.

11) A surveyor is standing 25 ft from a building and is looking at the top with an angle of elevation of 65° . If his eye height is 6 ft, how tall is the building? Round to the nearest tenth.

12) A kite is being flown using 150 yards of string. The kite has an angle of elevation with the ground of 65 degrees. How high above the ground is the kite?