Unit 2 Test Review
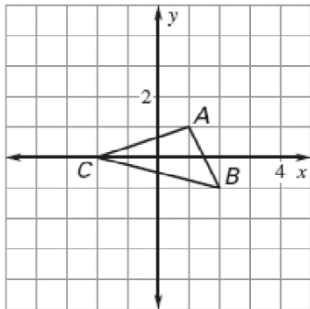
Similar Triangles:

1) In the figure, ΔRST ~ ΔXYZ.
   a) Find the scale factor of ΔRST to ΔXYZ.

   b) Find the perimeter of both triangles. What is the ratio of the perimeters of the 2 triangles?
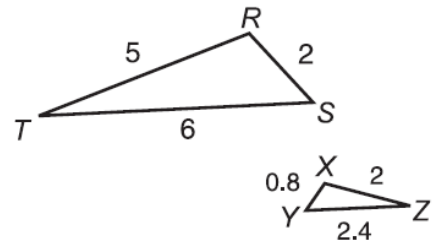
2) Dilations:
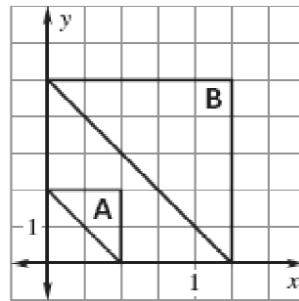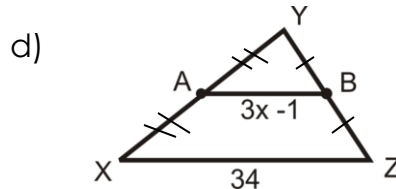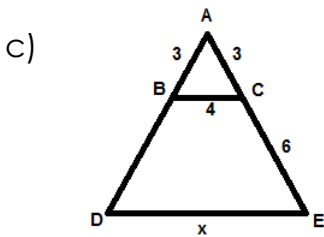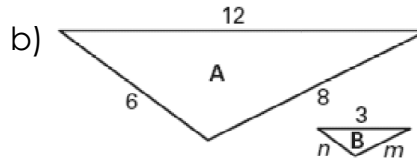   a) Draw a dilation with k = 2

   b) Determine the scale factor, k = ____
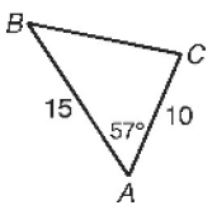
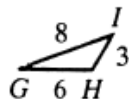3) Find the length of the missing side(s).
   a)

   b)

   c)

   d)
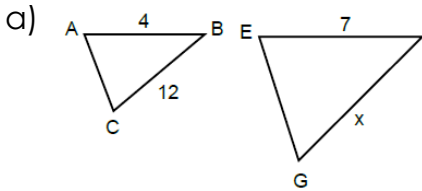
4) Determine if the following triangles are similar. If so, give the postulate and similarity statement.
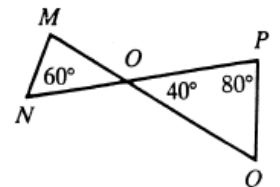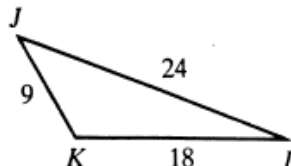
   a) ΔABC ~ _____ by_____

   b) ΔGHI ~ _____ by_____

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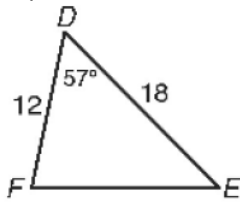
5) If a 42.9 ft tall flagpole casts a 253.1 ft long shadow, then how long is the shadow that a 6.2 ft. tall woman casts?

SOHCAHTOA:

6) a) Find the 3 trig ratios from Angle A and Angle B.
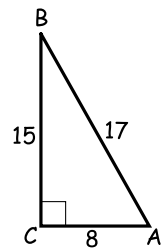
    b) How do the ratios compare for the two angles?

B

15   17

C   8   A

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7) **Draw ΔCAT where ∠ATC = 90°, CA = 53, and CT = 28.**

    a) What is the length of AT?

    b) What is sin C?   c) What is tan A?

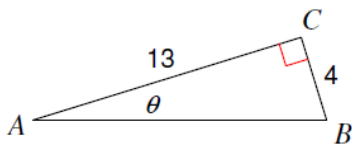8) **Draw ΔABC where ∠B = 90° and $\sin A = \dfrac{12}{20}$.**

    a) What is the length of AB?

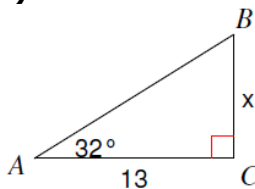   b) What is tan A?   c) What is cos A?

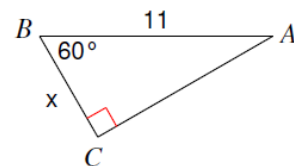9) Solve for the missing side or angle using Trig Ratios (sin, cos, tan).

a)

C
13
4
θ
A   B

b)

B
x
32°
A   13   C

c)

B   11   A
60°
x
C

d)

A
5 50.1°
C   x   B

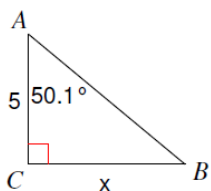**e)**
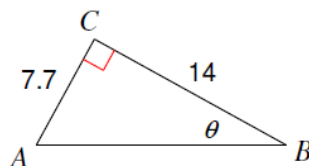
C
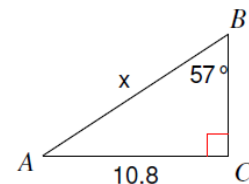7.7   14
θ
A   B

f)

B
x   57°
A   10.8   C

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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?