UNIT 7 CORRECTIVE ASSIGNMENT
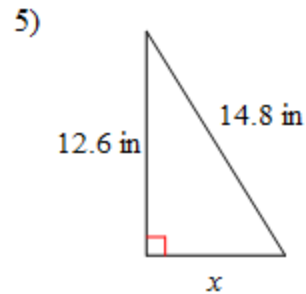
ALGEBRA REVIEW: 2 points each.
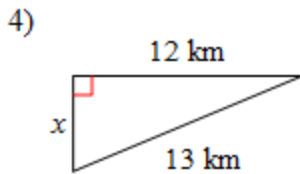
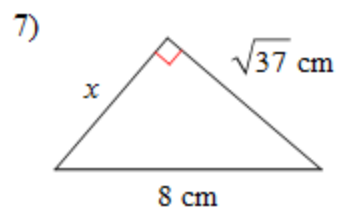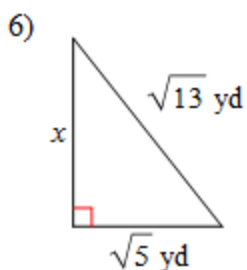|		
1) Solve: $\dfrac{-3+v}{9} \geq -2$	2) Factor: $2x^2 - x - 15$	3) Graph: $6x - y = 4$
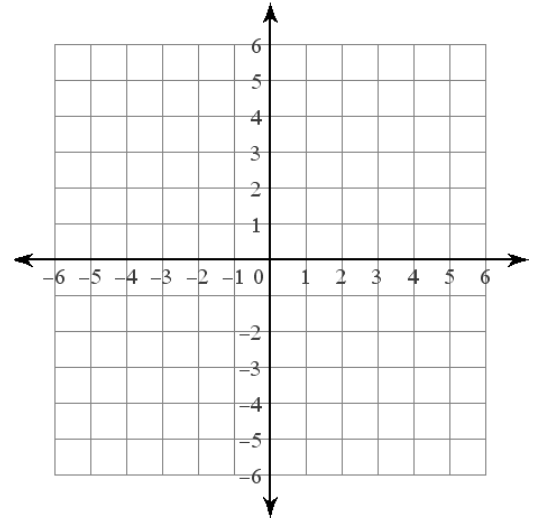
Directions: Find the missing side of each triangle. Round your answers to the nearest tenth if necessary. 4 points each.
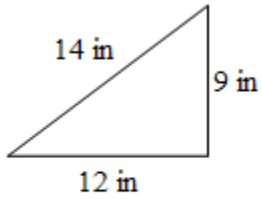
4)

12 km

x

13 km

5)

14.8 in

12.6 in

x

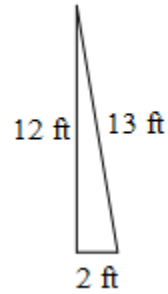**Directions: Find the missing side of each triangle. Leave your answers in simplest radical form. 4 points each.**

6)

$\sqrt{13}$ yd

x

$\sqrt{5}$ yd

7)

$\sqrt{37}$ cm

x

8 cm

Directions: State if each triangle is acute, obtuse, or right. 4 points each.
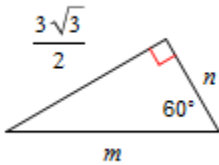
8)

14 in
9 in
12 in

9)

12 ft   13 ft
2 ft

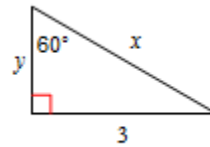**Directions: Find the missing side lengths.   Leave your answers as radicals in simplest form. 4 points each.**

10)

$\frac{3\sqrt{3}}{2}$
n
60°
m

11)

60° x
y
3

12)

45° m
n
$5\sqrt{2}$

13)

$10\sqrt{6}$
45°
x 60°
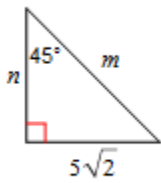
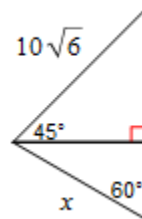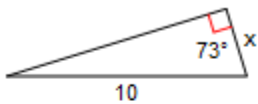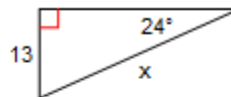**Directions: Find the missing side.   Round to the nearest tenth. 4 points each.**
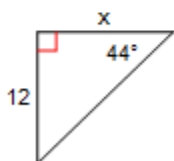
14)

73° x
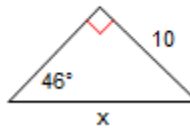10

15)

24°
13
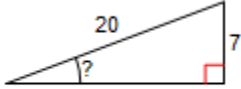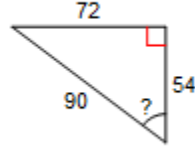x

16)

x
44°
12

17)

10
46°
x

Directions: Find the measure of the indicated angle to the nearest degree. 4 points each.

18)

19)

Directions: For each situation draw a picture and then solve. Round to the nearest tenth if necessary. 5 points each.

20) What is the angle of depression between a woman in a hot air balloon that is 50 feet off the ground and her friend that is 100 feet from being directly underneath the balloon?

21) A slide on the playground starts 12 feet off the ground and has an angle of elevation with the ground of 25°. How long is the slide?

Unit 7 Applications

22) Mr. Brust is building his own house deep in the woods of Germany. He wants to be in an area that is all by himself because he doesn't play well with others. He builds the south wall of his house to be 33 feet high and perpendicular to floor which will be 44 feet long. He's running out of funds so instead of building a normal house with 4 sides, his house is going to have 3 sides. That means the last side will be a slanted roof.

a) Draw a picture, labeled correctly, of this situation (2 points).

b) Mr. Brust goes to the store and buys wood to build the slanted roof to be 54 feet long. Did he buy the correct amount of wood for the roof?

23) The Algebros go boating one day. Mr. Kelly and Mr. Brust ended up off course (typical!). When they realized that they needed to boat back to Mr. Sullivan they were 800 feet apart. The angle between each other and Mr. Sullivan for each of them was 45°.

      a) Draw a picture, labeled correctly, of this situation (2 points).

      b) How far are they each to Mr. Sullivan?

24) Mr. Kelly bets Mr. Brust that he can measure how tall a certain tree is outside without climbing the tree. Mr. Brust looks up at the tree and realizes that there is no way. The first thing that Mr. Kelly does is that he knows he is 40 inches tall and he then measures his shadow to be 60 inches tall.

      a) Draw a picture, labeled correctly, of this situation (2 points).

      b) What is the angle of elevation from the end of the shadow to the top of Mr. Kelly's head(round to the nearest whole degree)? (3 points).

 Mr. Kelly then measures the shadow of the tree to be 502 inches long and knows that the angle of elevation will be the same as it was for his shadow.

      c) Draw a picture, labeled correctly, of this situation (2 points).

      d) How tall is the tree?