ACC. Coordinate Algebra   Name_____

Section 28.1--28.3--Study Guide

Date_____ Period____
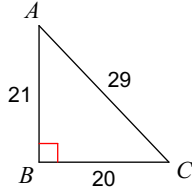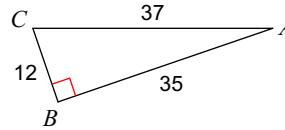
CIRCLE OR BOX ALL ANSWERS.
Find the value of each trigonometric ratio. Express answers as a fraction in simplest form and as a decimal rounded to four places.
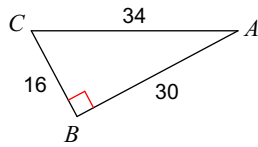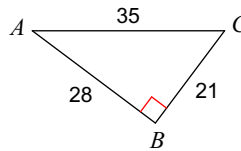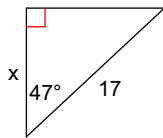
1) tan A

2) cos C

3) sin A

4) tan C

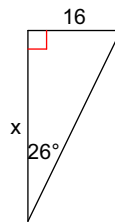**Find the missing side. Round to the nearest tenth.**
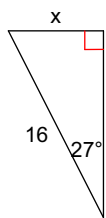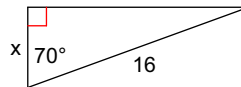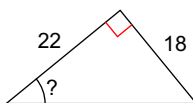
5)

6)

7)

8)

Find each angle measure to the nearest degree.
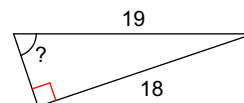
9) tan Y = 0.3057

10) sin Z = 0.7314

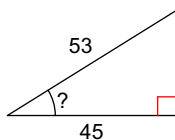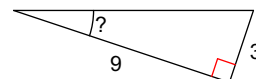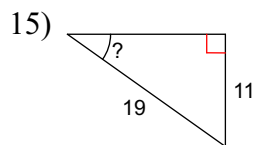**Find the measure of the indicated angle to the nearest degree.**

11)

12)

13)

14)

Solve each right triangle (find the value of all the missing sides/angles). Round all answers to the nearest tenth.

15)

16)
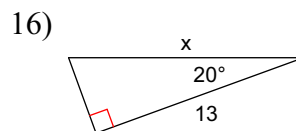
Draw and label a picture for each problem. Solve for the missing information.

17) The pilot of a traffic helicopter sights an accident at an angle of depression of 18°. The helicopter's altitude is 1560 ft. What is the horizontal distance from the helicopter to the accident? Round to the nearest foot.

18) Jeff finds that an office building casts a shadow that is 93 ft long when the angle of elevation to the sun is 60°. What is the height of the building? Round to the nearest foot.

19) A person located 3 *km* from a rocket launch site sees a rocket at an angle of elevation of 38°. How high is the rocket at that moment? Round to the nearest tenth.

20) A kite is flying at an angle of elevation of about 40°. All 80 *m* of string have been let out. Ignoring the sag in the string, find the height of the kite to the nearest tenth of a meter.

Find the missing side lengths. Leave your answers as radicals in simplest form.

21)

22)

23)

24)

25)

26)
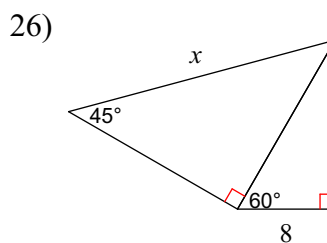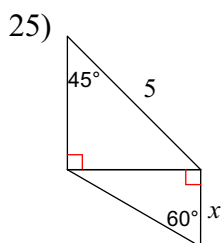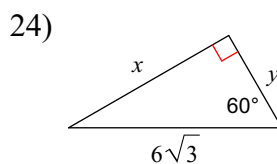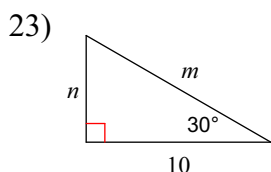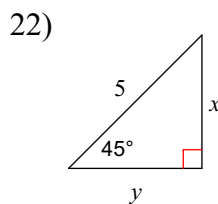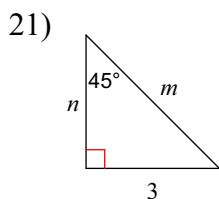
Draw a picture to help you answer the following questions. Leave answers in simplest radical form.

27) The YIELD traffic sign has the shape of an equilateral triangle with a side length of 36 *in*.

What is the height of the sign? _____

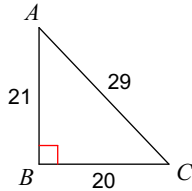What is the perimeter of the sign? _____

What is the area of the sign? _____

28) Find the perimeter and area of a 45°-45°-90° triangle with hypotenuse length 16 inches.

29) Also study #10, the mountain problem, from the packet.

Name_____

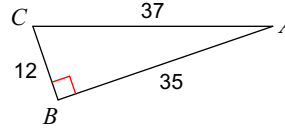## Section 28.1--28.3--Study Guide

Date_____ Period____

CIRCLE OR BOX ALL ANSWERS.
Find the value of each trigonometric ratio. Express answers as a fraction in simplest form and as a decimal rounded to four places.
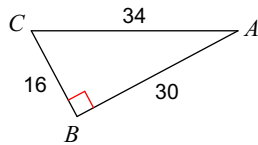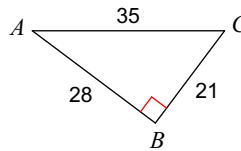
1) tan *A* $\dfrac{20}{21}$
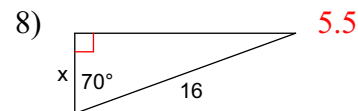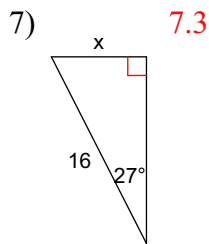

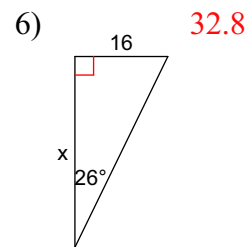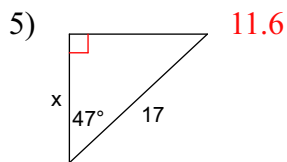2) cos *C* $\dfrac{12}{37}$

3) sin *A* $\dfrac{8}{17}$

4) tan *C* $\dfrac{4}{3}$

Find the missing side. Round to the nearest tenth.
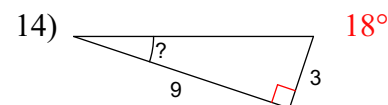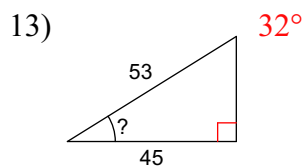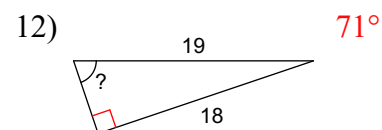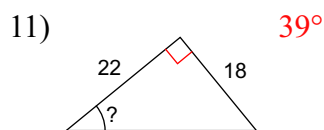
5) 11.6

6) 32.8

7) 7.3

8) 5.5

Find each angle measure to the nearest degree.
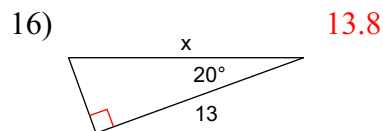
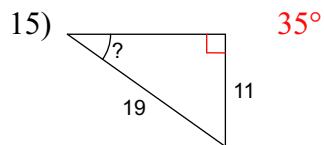9) tan Y = 0.3057 17°

10) sin Z = 0.7314 47°

Find the measure of the indicated angle to the nearest degree.

11) 39°

12) 71°

13) 32°
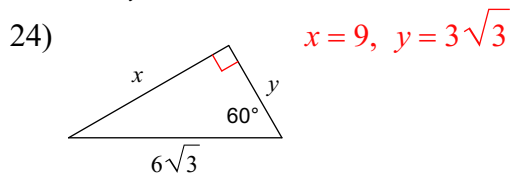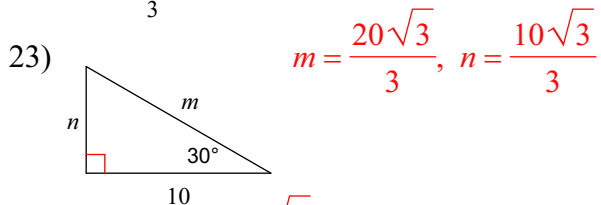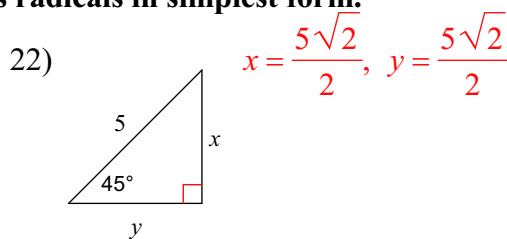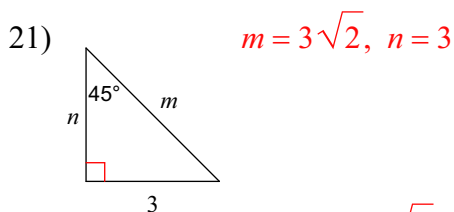

14) 18°

Solve each right triangle (find the value of all the missing sides/angles). Round all answers to the nearest tenth.

15) $35°$

16) 13.8

Draw and label a picture for each problem. Solve for the missing information.

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altitude is 1560 ft. What is the horizontal distance from the helicopter to the accident? Round to the
nearest foot.

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high is the rocket at that moment? Round to the nearest tenth.

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the sag in the string, find the height of the kite to the nearest tenth of a meter.

Find the missing side lengths. Leave your answers as radicals in simplest form.

21) $m = 3\sqrt{2},\ n = 3$

22) $x = \dfrac{5\sqrt{2}}{2},\ y = \dfrac{5\sqrt{2}}{2}$

23) $m = \dfrac{20\sqrt{3}}{3},\ n = \dfrac{10\sqrt{3}}{3}$

24) $x = 9,\ y = 3\sqrt{3}$

25) $\dfrac{5\sqrt{6}}{6}$

26) $16\sqrt{2}$

Draw a picture to help you answer the following questions. Leave answers in simplest radical form.

27) The YIELD traffic sign has the shape of an equilateral triangle with a side length of 36 *in*. $h = 18\sqrt{3}$ in, P =

What is the height of the sign? _____

What is the perimeter of the sign? _____

What is the area of the sign? _____

28) Find the perimeter and area of a 45°-45°-90° triangle with hypotenuse length 16 inches. $P = 16 + 16\sqrt{2}$ in, A

29) Also study #10, the mountain problem, from
the packet.