Analytic Geometry

March 9, 2016
Quiz Review
Trig Ratios (Sides)

EQ:
How is finding the angle using trig ratios different from finding the sides?

MMC9-12.G.SRT.6 Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.
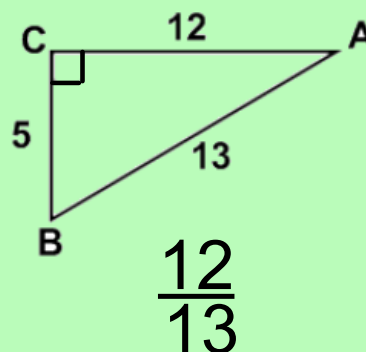
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Quiz Review

Write each ratio for the diagram at the right.

1. cos A = $\dfrac{12}{13}$

2. sin B = $\dfrac{12}{13}$

3. tan A = $\dfrac{5}{12}$

4. cos B = $\dfrac{5}{13}$

$\dfrac{12}{13}$

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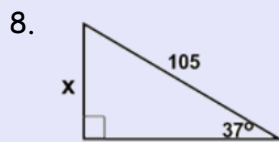**Use your calculator to determine each of the following to the nearest hundredth**

5. $\tan 72° =$ ___3.08___

6. $\cos 48° =$ ___0.67___

7. $\sin 56° =$ ___0.83___

Oct 22-9:49 AM

Find the lengths of each side of the triangle using your knowledge of trig ratios

8.

105

x

37°
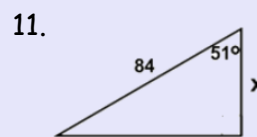
x = ___63.19___

9.

42°

x

68

x = ___91.50___

10.

x

64°

99

x = ___48.29___

11.

84

51°

x

x = ___52.86___

12.

x

49°

17

x = ___19.56___

13.

23°

x

43
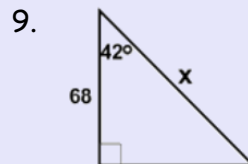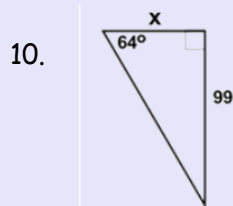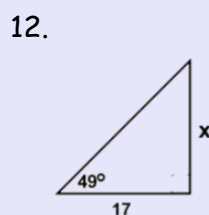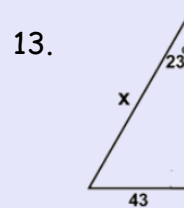
x = ___110.05___

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Solve each application. Round trig functions to the nearest hundredth unless otherwise noted.

14. A skateboard ramp inclines at an angle of 15 degrees. If the ramp has a run of three meters, what is the length of the ramp?

Ramp Length= __3.11 m__

15. A ladder is resting against the side of a house. If it creates a 36 degree angle with the house and the ladder is 18 feet tall, how far from the base of the house is the base of the ladder?

Base of Ladder = __10.58 ft__

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16. At a certain time of day, a tree casts a shadow that is 17 feet long. If the angle of elevation is 18 degrees, how tall is the tree?

Tree = __5.52 feet__

17. A parasail is towed behind a boat by a rope that is 30 feet long. The parasail has an angle of depression of 18 degrees to the boat. How high above the boat is the parasail?

Parasail = __9.27 ft__

18. A park ranger on a 325-foot observation post spots a fire at an angle of depression of 6 degrees. To the nearest foot, how far is the fire from the base of the tower?

Fire = __3,092 ft.__

Mar 24-6:54 AM

19.   After the take-off from an airport, an airplane's angle of ascent is 15 degrees. The airplane climbs to an altitude of 4 miles. To the nearest hundredth of a mile, what is the horizontal distance between the airplane and the airport?

Distance= __14.93 miles__

20. The sun is at an angle of elevation of 72 degrees from the ground. How long, to the nearest foot, is the shadow of a 1500-foot building?
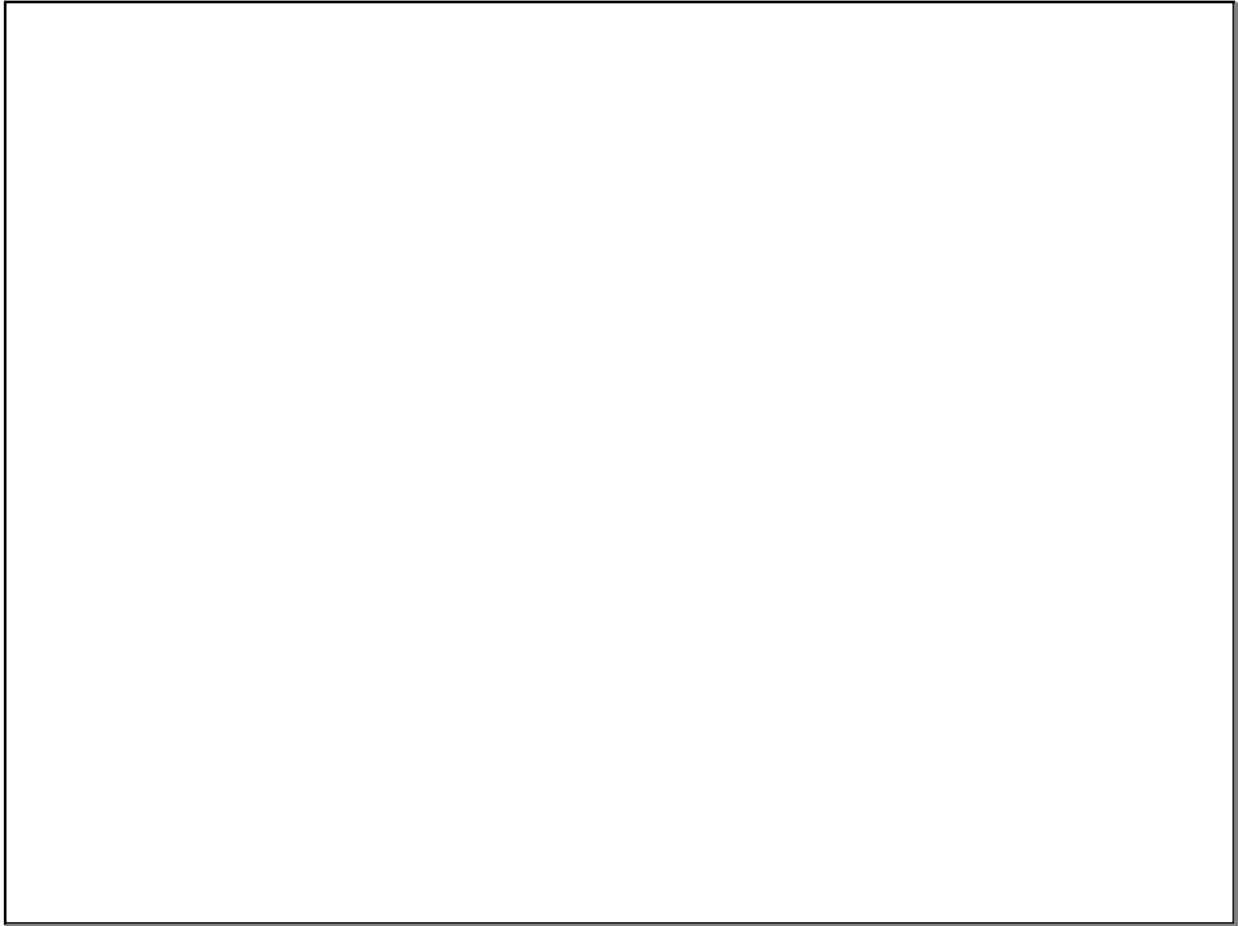
Shadow= __487 feet__

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21)   A bank security camera is mounted on the wall. The camera is at a set angle of depression of 21 degrees so that it is focused on a point on the floor near the main entrance door. The camera is a horizontal distance of 32 feet from the focus point. To the nearest hundredth of a foot, how high above the floor is the camera?

Camera= __12.28 ft.__

22.   An eagle, while flying, spots a field mouse on the ground. The eagles line of site forms a 13 degree angle of depression. If the mouse looks up at the eagle, what type of angle would its line-of-sight form, and what is the measure of the angle?

Angle of elevation = __angle of elevation; 13°__

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Mar 10-8:50 AM