

### 4.3 Inverse Trig Functions

Find each angle measure to the nearest degree.

1)  $\sin Y = 0.8829$

2)  $\tan W = 57.2900$

3)  $\cos V = 0.5878$

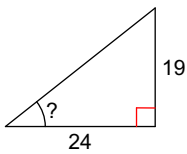
4)  $\cos B = 0.1736$

5)  $\tan W = 4.0108$

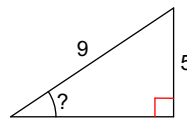
6)  $\sin Z = 0.6691$

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

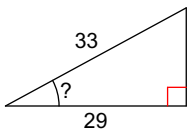
7)



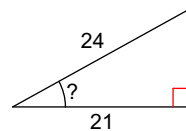
8)



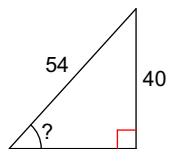
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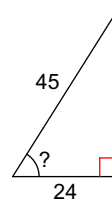
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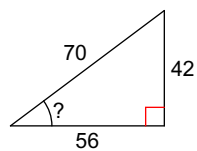
11)



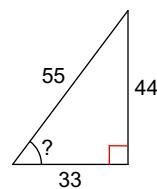
12)



13)



14)



15) The tallest television transmitting tower in the world is in North Dakota, and it is 2059 feet tall. If you are on level ground exactly 5280 feet (one mile) from the base of the tower, what is your angle of elevation looking up at the top of the tower?

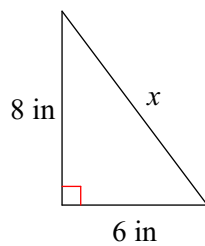
16) A fire department's longest ladder is 110 feet long, and the safety regulation states that they can use it for rescues up to 100 feet off the ground. What is the maximum safe angle of elevation for the rescue ladder?

17) 13. An observer on the ground at point A watches a rocket ascend. The observer is 1200 feet from the launch point B. As the rocket rises, the distance  $d$  from the observer to the rocket increases.

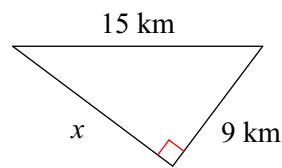
- Express the measure of angle A in terms of  $d$ .
- Find the measure of angle A if  $d = 1500$  feet.
- Find the measure of angle A if  $d = 2000$  feet.

**Use PYTHAGOREAN THEOREM to find the missing side length.**

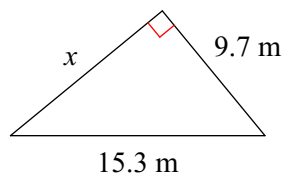
18)



19)



20)



21)

