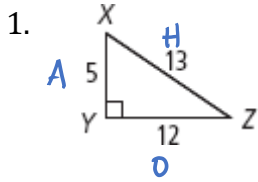


Right Triangle Trig Review HW

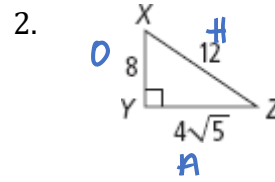
NAME: _____

Write the ratios of the given trigonometry functions below. Answers should be in simplest radical form.



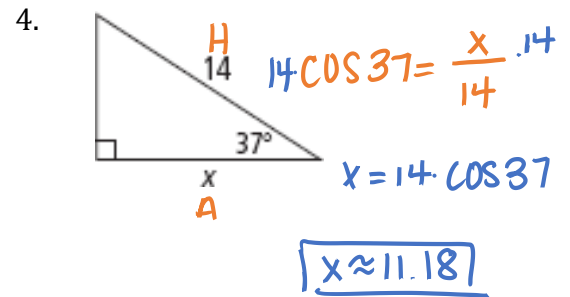
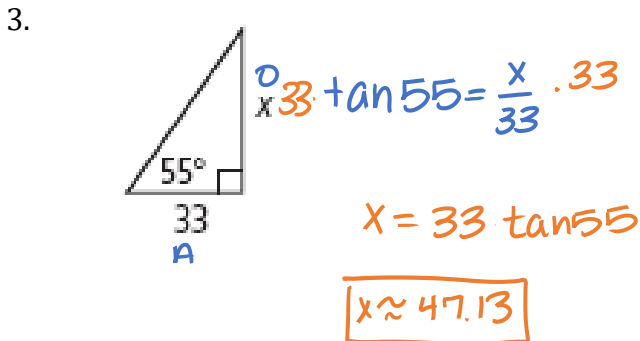
S O C A T O
H H H A

$$\begin{aligned}\sin(\angle X) &= \frac{12}{13} \\ \cos(\angle X) &= \frac{5}{13} \\ \tan(\angle X) &= \frac{12}{5}\end{aligned}$$

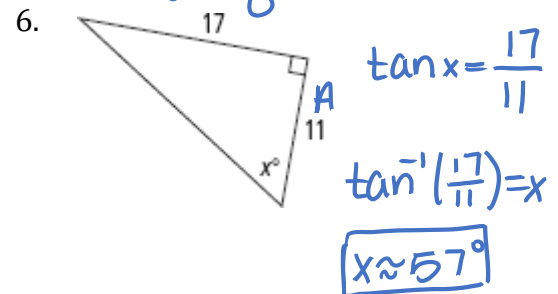
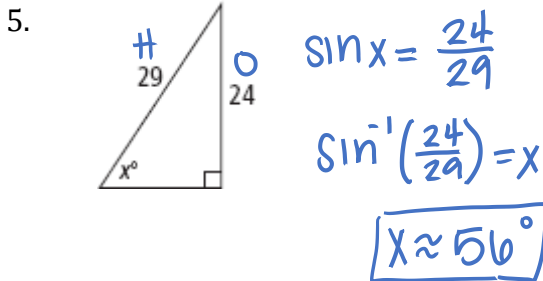


$$\begin{aligned}\sin(\angle Z) &= \frac{8}{12} = \frac{2}{3} \\ \cos(\angle Z) &= \frac{4\sqrt{5}}{12} = \frac{\sqrt{5}}{3} \\ \tan(\angle Z) &= \frac{8}{4\sqrt{5}} = \frac{2}{\sqrt{5}} = \frac{2\sqrt{5}}{5}\end{aligned}$$

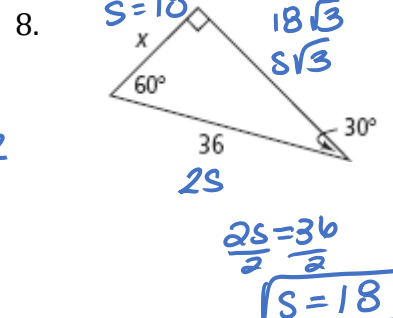
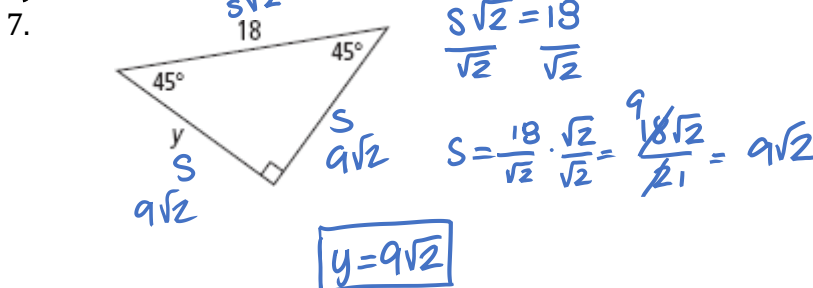
Find the missing side. Round side lengths to the nearest hundredth.



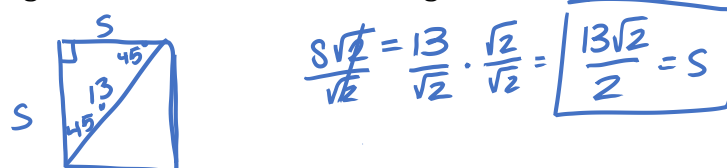
Find the missing angle. Round angles to the nearest degree. (inverse trig!)



Recall... Special Right Triangles!! Solve for the missing sides. Leave answers in simplest radical form! (No Calc!)

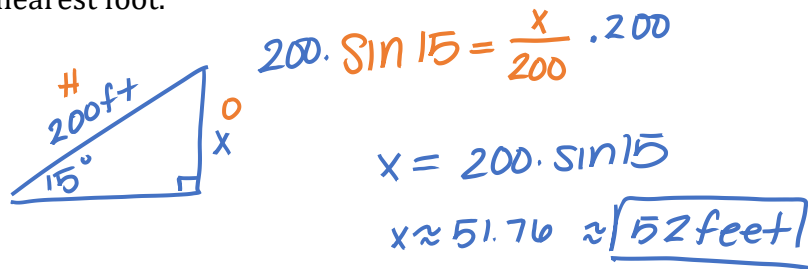


9. A square has diagonal length 13 m. What is the side length of the square, to the nearest centimeter?

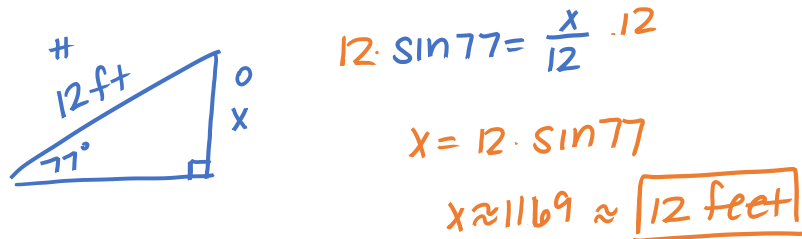


APPLICATIONS:

10. An escalator at a shopping center is 200 ft long, and rises at an angle of 15° . What is the vertical rise of the escalator? Round to the nearest foot.

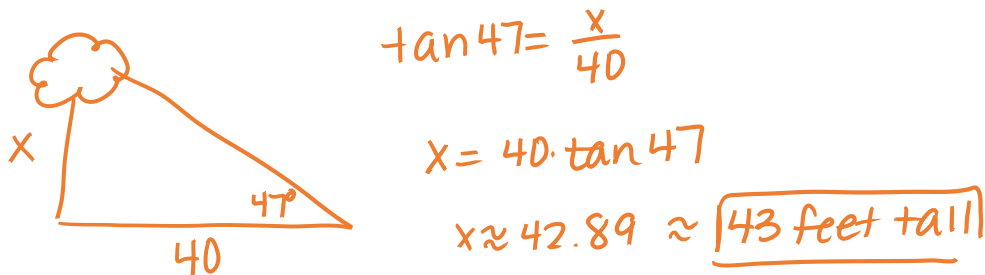


11. A 12-ft-long ladder is leaning against a wall and makes a 77° angle with the ground. How high does the ladder reach on the wall? Round to the nearest foot.



Angle of Elevation/Depression Word Problems:

12. The shadow of a tree is 40 ft long. The angle of elevation from the tip of shadow to the top of the tree is 47° . How tall is the tree? Round your answer to the nearest foot.



13. An airplane is flying at an altitude of 10,000 ft. The airport at which it is scheduled to land is 264,000 feet away. Find the angle at which the airplane must descend for landing (Hint: Angle of Depression). Round your answer to the nearest degree.

