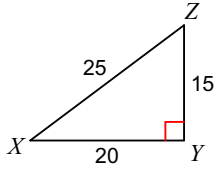


9.2 - 9.4 ~ Sine, Cosine, & Tangent Ratios

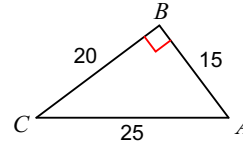
Past due on _____ Period _____

Write each trigonometric ratio as a fraction in simplest form.

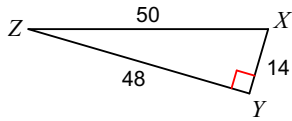
1) $\tan X$



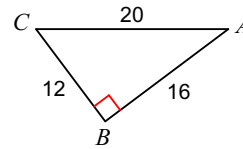
2) $\cos A$



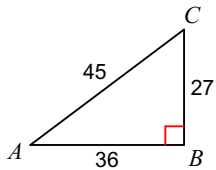
3) $\sin Z$



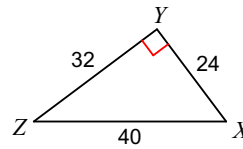
4) $\tan C$



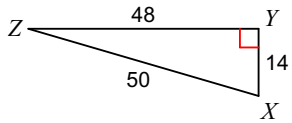
5) $\cos C$



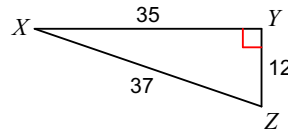
6) $\sin X$



7) $\sin X$

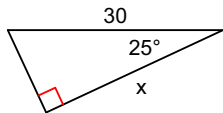


8) $\tan X$

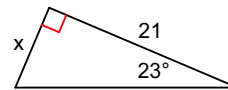


Set up and solve a trigonometric equation to find the length of x . Provide an exact answer - solve for x - and an approximation rounded to the nearest hundredth.

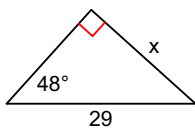
9)



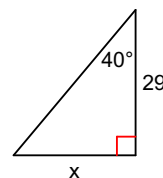
10)



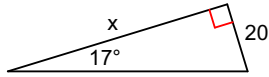
11)



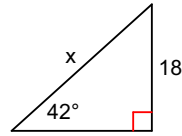
12)



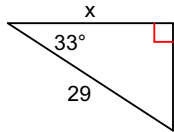
13)



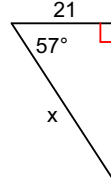
14)



15)



16)



Draw and label a diagram that represents each situation. Then use a trigonometric ratio to set up an equation and solve.

- 17) To calculate the height of a tree, a botanist walks 20 feet from its base and looks up, at a 70° angle, to its top. Find the height of the tree to the nearest foot.
- 18) A hot air balloon lifts vertically 125 feet into the air. A wind blows it aside such that a rope connecting the balloon to a stake makes a 9° angle with the ground. Approximately how long is the rope that connects the balloon to the ground?
- 19) A 24-foot long ladder is leaning against a house. It makes a 76° with the ground. How far, to the nearest tenth of a foot, is the bottom of the ladder from the base of the house?
- 20) A water slide makes an angle of about 13° with the ground. The slide extends horizontally 58.2 meters. Find the height of the slide to the nearest tenth of a meter.