Use SOHCAHTOA to solve for x.


## Solve for all the missing pieces of the triangle.



An observer sights the top of a radio tower, which he knows is 1000 feet tall. The angle of elevation between the line of sight and the ground is $55^{\circ}$. How far from the tower is the observer? Draw a diagram to support your answer. Round to two decimal places.

The radius of a carousel is 8 meters. If you traveled $900^{\circ}$, what is the total arc length you traveled?

You baked a delicious chocolate cake that has a diameter of 9 inches. If the slice of cake you gave your sister has an angle of $15^{\circ}$, what is the area of the sector of cake your sister ate?

## Sketch the angles: $-193^{\circ}$ and $700^{\circ}$ Then find the reference angle.

Find the 6 trig ratios of $\frac{11 \pi}{3}$

Given $\sin (\theta)=\frac{1}{5}$ and $\tan (\theta)<0$, find the exact value of $\cos (\theta)$. Leave as fractions and radicals!

