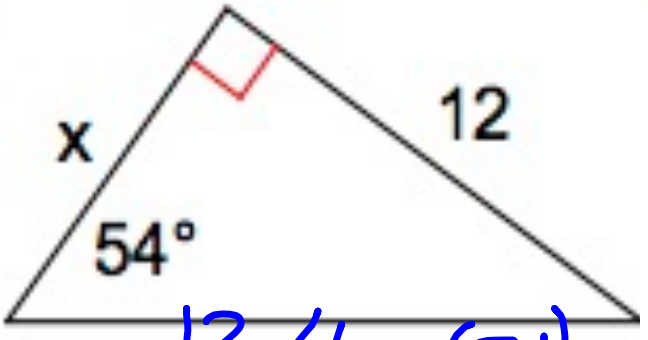
Warm Up

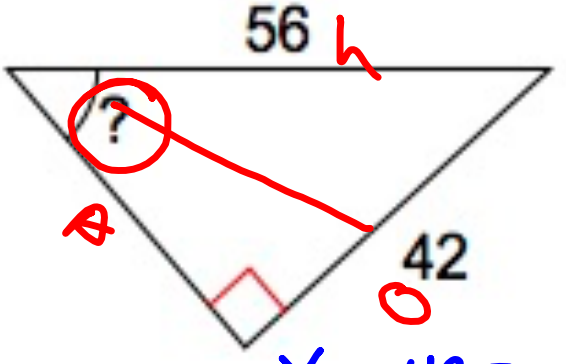
Find the measure of the side or angle indicated.

1)



$12/\tan(54) = 8.718$

2) $\sin^{-1}\left(\frac{42}{56}\right)$



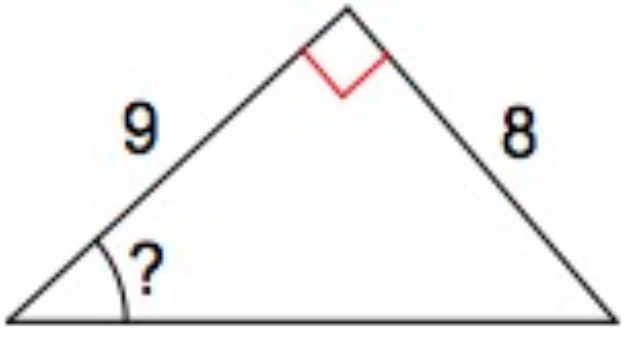
$x = 48.59$

$\sin^{-1}\left(\frac{42}{56}\right)$

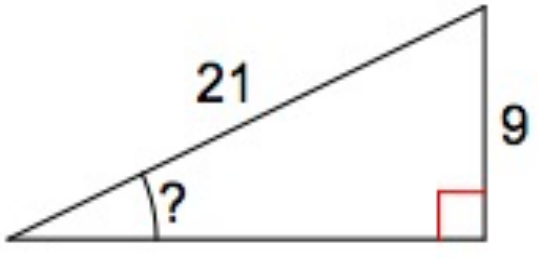
Missing Angles Quiz

Find the measure of the angle indicated

1)



2)



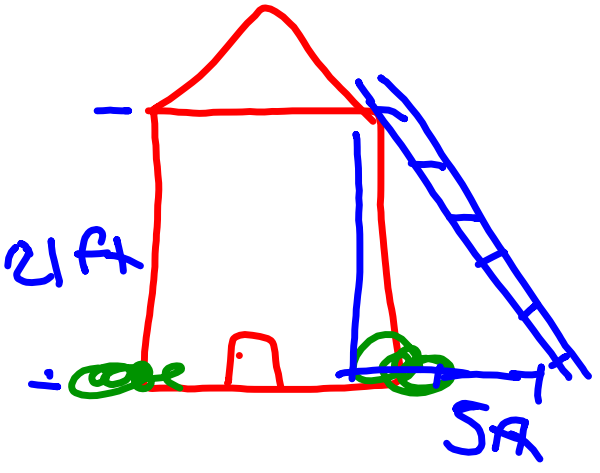
9-6

Word problems you can solve by trig

- Given a contextual problem I can draw a picture, label the sides and angles and solve.

You want to hang up St. Patrick's lights on your house. There are bushes around your house, so the ladder has to be set up 5 feet away from your house. If your roof is 21 feet tall, to the nearest foot, how tall does your ladder need to be? Draw

a diagram.

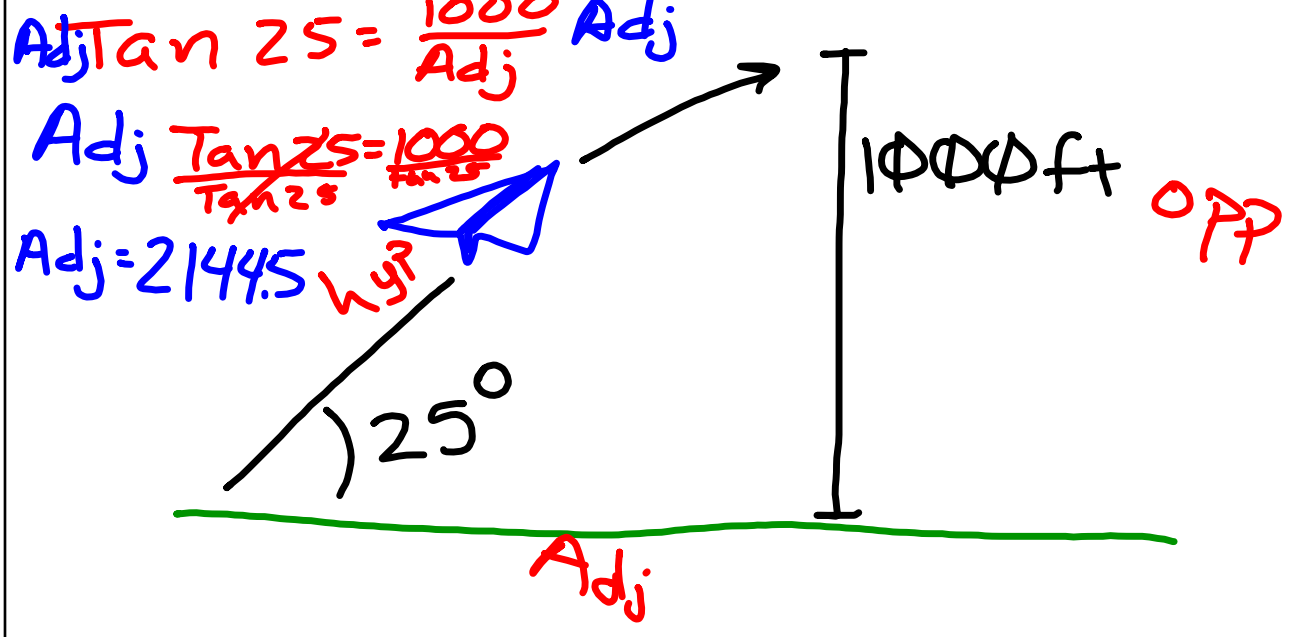


$21^2 + 5^2 = c^2$

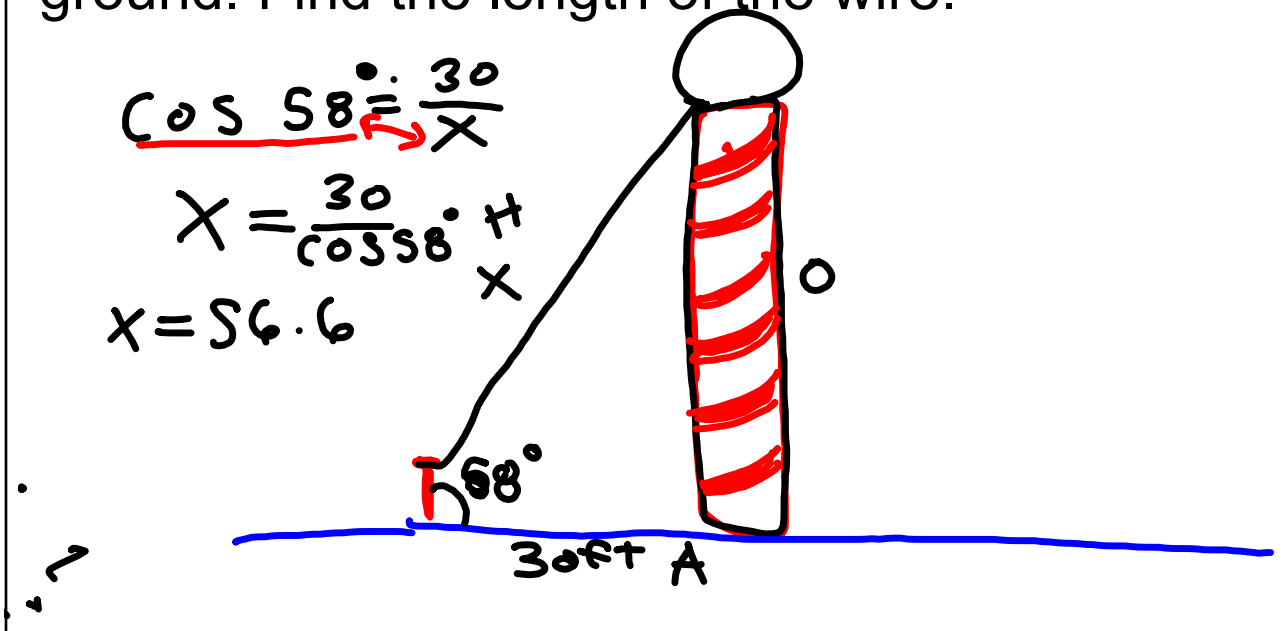
$\sqrt{466} = \sqrt{c^2}$

$21.58 \text{ ft} = c$

An airplane climbs at an angle of 25° with the ground. Find the ground distance it has traveled when it is 1000 feet high.



A wire attached to the top of a pole reaches a stake in the ground 30 feet from the foot of the pole and makes an angle of 58° with the ground. Find the length of the wire.



A 15 foot ladder leans against a building. The ladder's base is 6 feet from the building. Find the angle which the ladder makes with the ground.

$\cos^{-1}\left(\frac{6}{15}\right)$

$= 66^\circ$