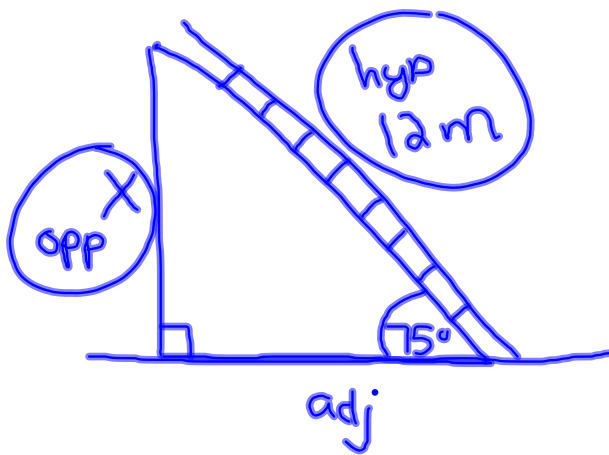
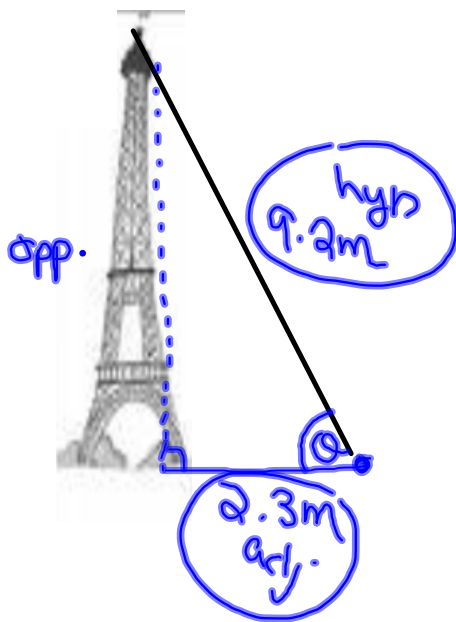


A ladder, 12 m long, leans against a wall so that an angle of 75° with the ground. How high will the ladder reach on the wall if given this information?



$$\begin{aligned}\sin \theta &= \frac{o}{h} \\ \sin 75^\circ &= \frac{x}{12} \\ \frac{0.9659}{1} &= \frac{x}{12} \\ x &= 11.6 \text{ m}\end{aligned}$$

A guy wire, 9.2 m long, one end is attached to the top of a t.v. tower. The other end of the guy wire is attached to a stake 2.3 m from the bottom of the tower. Find the measure of the angle that the wire makes with the ground, to the nearest degree.



$$\cos \theta = \frac{a}{h}$$

$$\cos \theta = \frac{2.3}{9.2}$$

$$\cos \theta = 0.25$$

$$\theta = 76^\circ$$