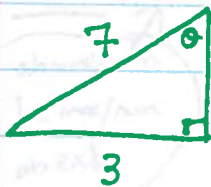
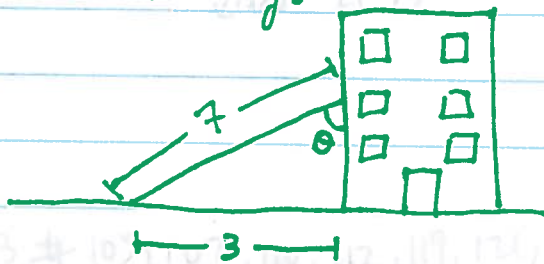


## Quiz 5 MATH 1540 Fall 2018

A 7 foot long ladder leans against a building. The foot of the ladder is 3 feet from the building. What angle does the ladder make with the building?

Soln:



From the triangle,

$$\sin(\theta) = \frac{3}{7}$$

↓ take  $\sin^{-1}$  of both sides

$$\sin^{-1}(\sin(\theta)) = \sin^{-1}\left(\frac{3}{7}\right)$$

$$\theta = \sin^{-1}\left(\frac{3}{7}\right)$$

$$\begin{aligned} &= 0.4429 \text{ rad} \\ &= 25.38^\circ \end{aligned} \left. \vphantom{\begin{aligned} &= 0.4429 \text{ rad} \\ &= 25.38^\circ \end{aligned}} \right\} \begin{array}{l} \text{either answer} \\ \text{is acceptable} \end{array}$$