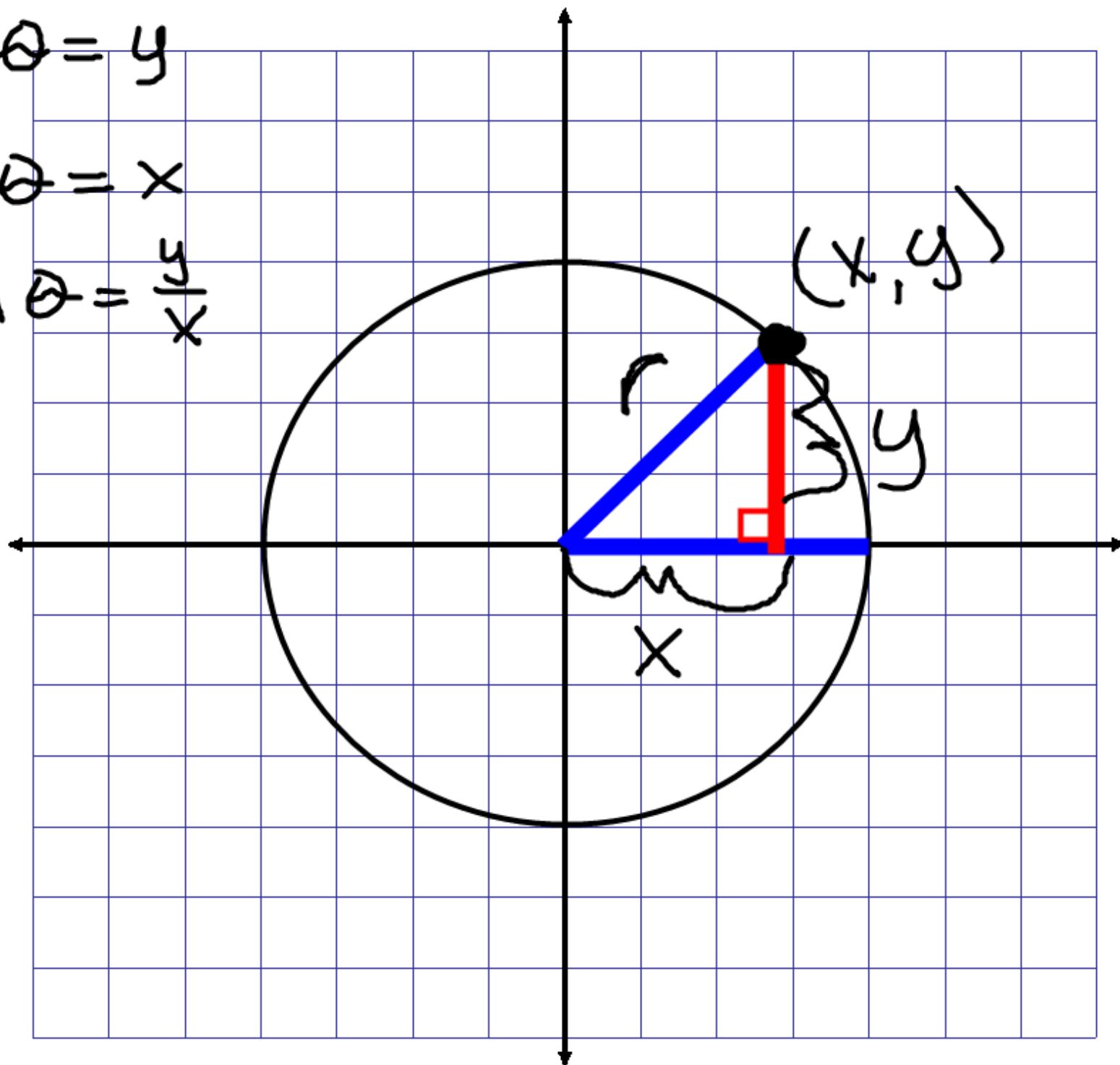
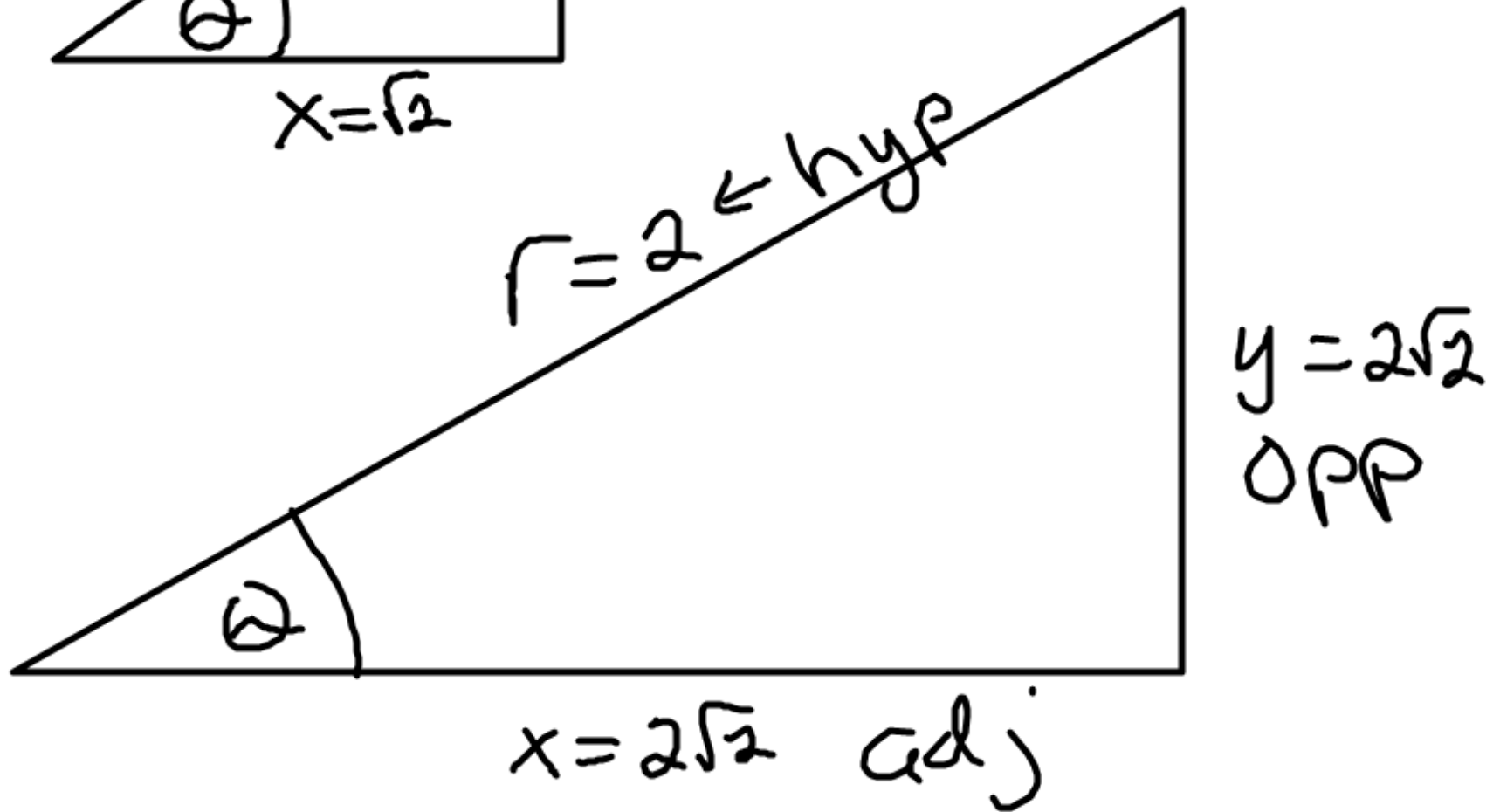
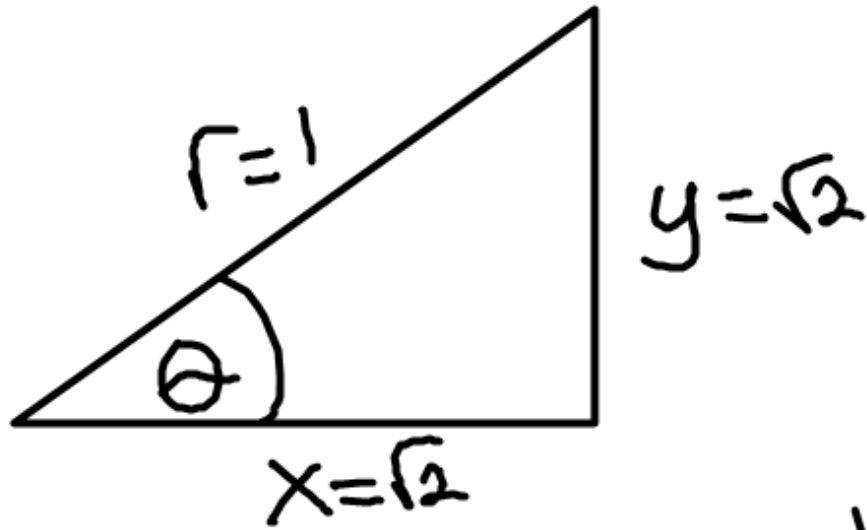


$$\sin \theta = y$$

$$\cos \theta = x$$

$$\tan \theta = \frac{y}{x}$$





$$\sin \theta = y = \sqrt{2}$$

$$\sin \theta = \frac{\text{opp}}{\text{hyp}} = \frac{2\sqrt{2}}{2}$$

$$\cos \theta = x = \sqrt{2}$$

$$\cos \theta = \frac{\text{adj}}{\text{hyp}} = \frac{2\sqrt{2}}{2} = \sqrt{2}$$

$$\tan = \frac{y}{x} = \frac{\sqrt{2}}{\sqrt{2}} = 1$$

$$\tan = \frac{\sin}{\cos} =$$

$$\frac{\sin}{\cos} = \frac{\text{opp/hyp}}{\text{adj/hyp}}$$

$$\frac{\cancel{\text{opp}}}{\cancel{\text{hyp}}} \cdot \frac{\cancel{\text{hyp}}}{\text{adj}} = \frac{\text{opp}}{\text{adj}}$$

SOH CAH TOA

$$\sin = \frac{\text{opp}}{\text{hyp}}$$

$$\cos = \frac{\text{adj}}{\text{hyp}}$$

$$\tan = \frac{\text{opp}}{\text{adj}}$$

$$\csc = \frac{\text{hyp}}{\text{opp}}$$

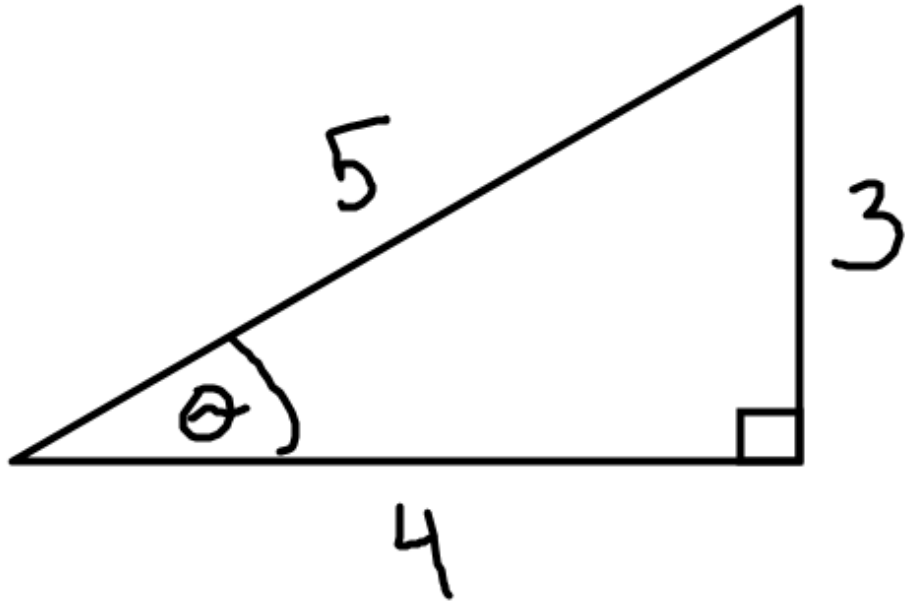
$$\sec = \frac{\text{hyp}}{\text{adj}}$$

$$\cot = \frac{\text{adj}}{\text{opp}}$$

$$\sin = \frac{y}{r}$$

$$\cos = \frac{x}{r}$$

$$\tan = \frac{y}{x}$$



$$\sin \theta = \frac{3}{5}$$

$$\cos \theta = \frac{4}{5}$$

$$\tan \theta = \frac{3}{4}$$

$$\csc \theta = \frac{5}{3}$$

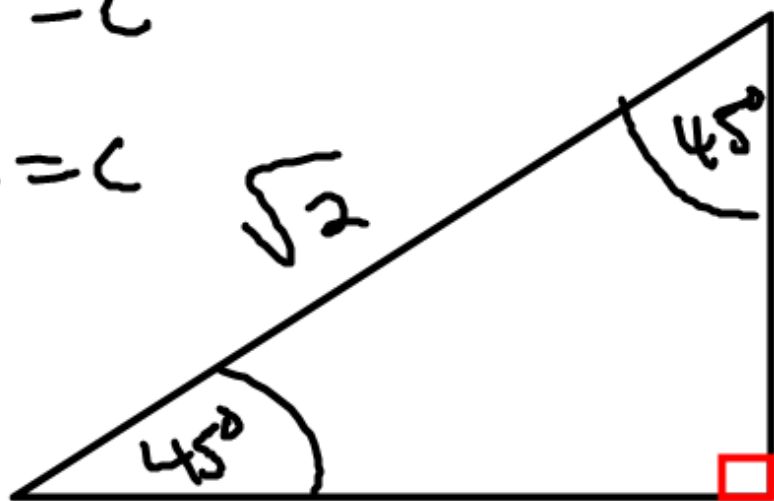
$$\sec \theta = \frac{5}{4}$$

$$\cot \theta = \frac{4}{3}$$

$$a^2 + b^2 = c^2$$

$$1 + 1 = c^2$$

$$\sqrt{2} = c$$



$$\frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

$$\theta = \frac{\pi}{4}$$

$$\sin \theta = \frac{\sqrt{2}}{2}$$

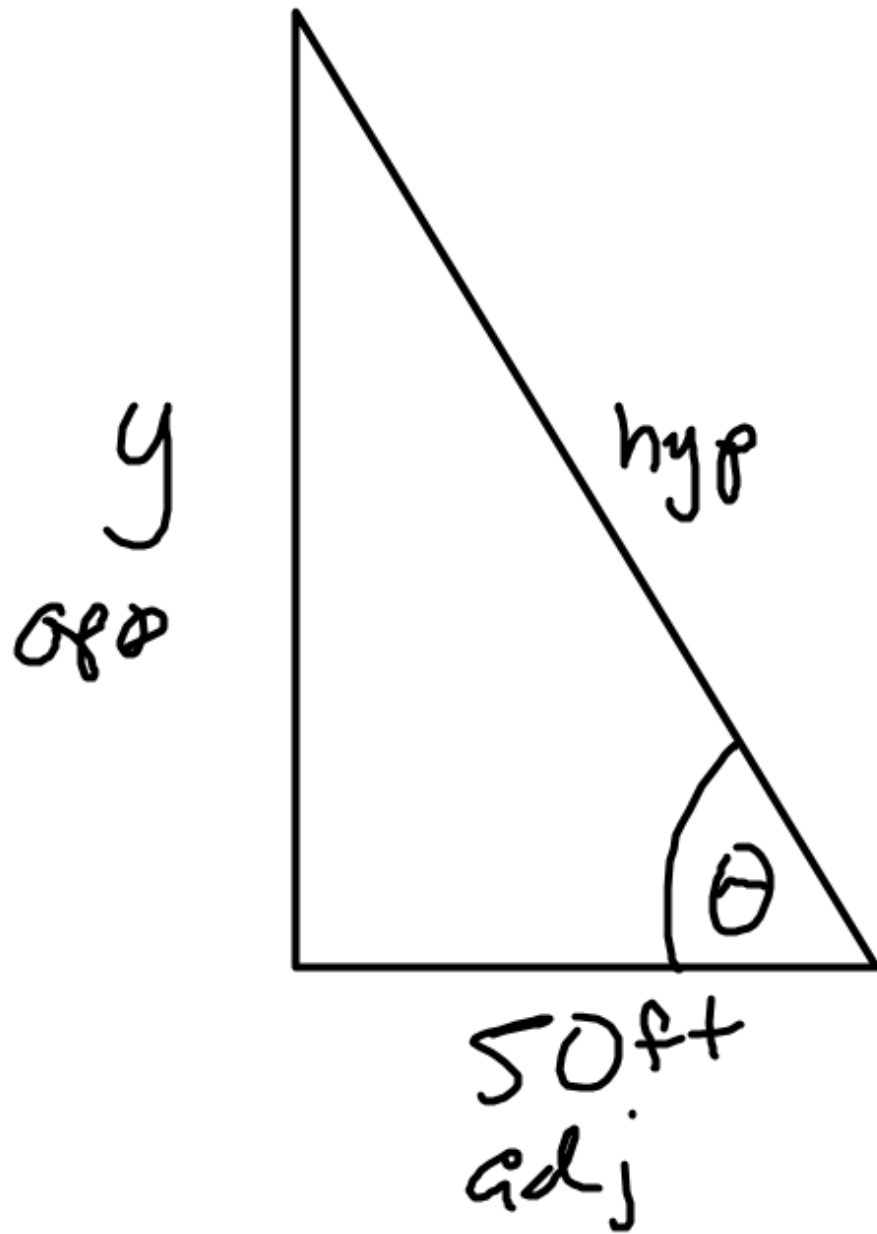
$$\cos \theta = \frac{\sqrt{2}}{2}$$

$$\tan \theta = 1$$

$$\csc \theta = \sqrt{2}$$

$$\sec \theta = \sqrt{2}$$

$$\cot \theta = 1$$



$$\theta = 71.5^\circ$$

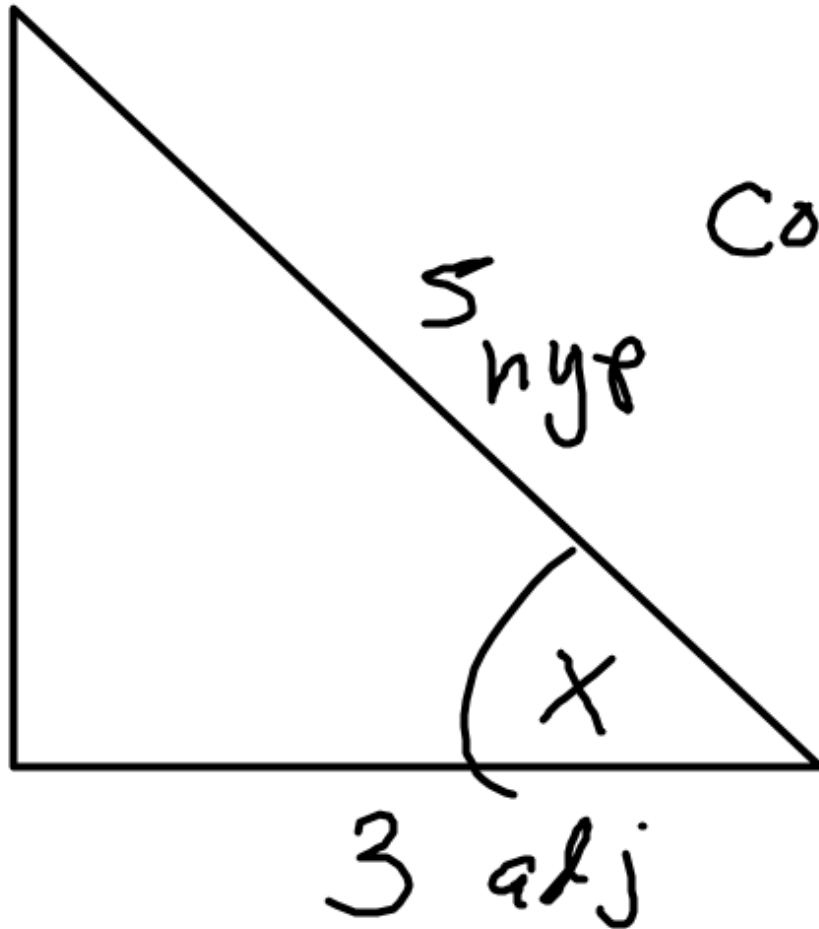
$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\tan 71.5 = \frac{y}{50}$$

$$50(\tan 71.5) = y$$

$$y = 149.4 \text{ ft}$$

$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$



$$\cos X = \frac{3}{5}$$

$$\cos X = 0.6$$

$$\cos^{-1} 0.6 = X$$

$$53.13^\circ = X$$

$$(\sin 60^\circ)(\csc 60^\circ) = 1$$

$$(\cancel{\sin 60^\circ}) \left(\frac{1}{\cancel{\sin 60^\circ}} \right) = 1$$

$$\sin 45 + \cos 45 = 1$$

$$(\sin 45)^2 + (\cos 45)^2 = 1$$

$$\left(\frac{\sqrt{2}}{2}\right)^2 \frac{1}{2} + \frac{1}{2} = 1$$

$$\frac{2}{4} = \frac{1}{2}$$

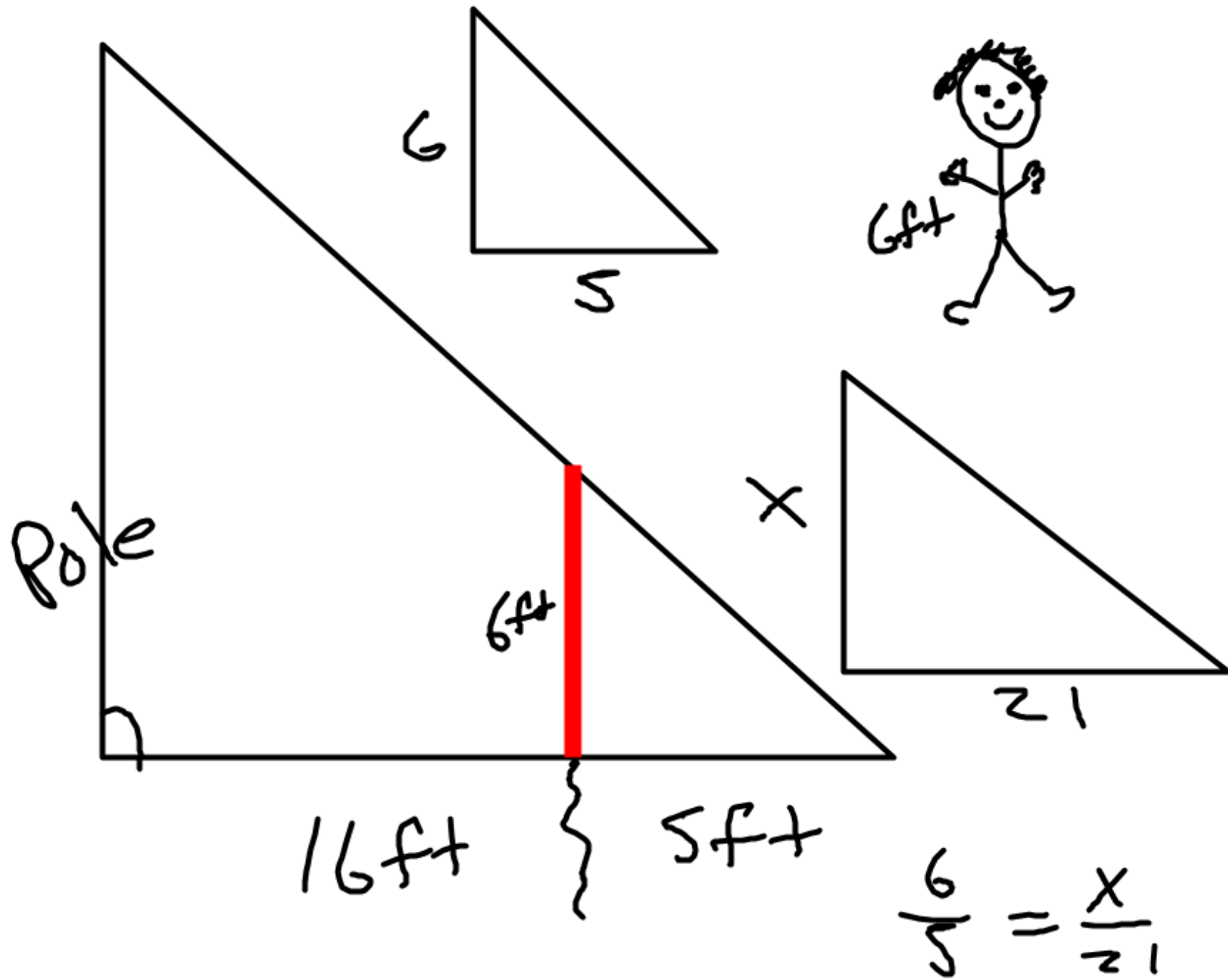
$$a^2 + b^2 = c^2$$

$$(\sin 60^\circ)^2 + (\cos 60^\circ)^2 = 1$$

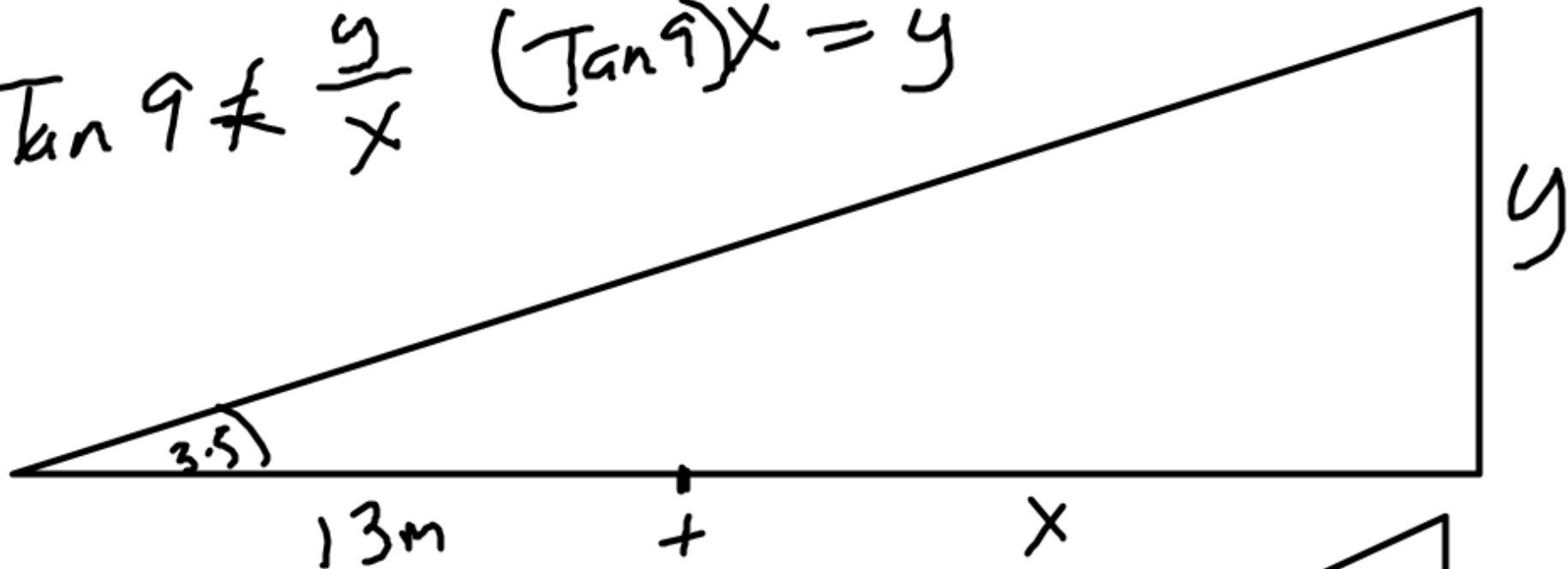
$$\left(\frac{\sqrt{3}}{2}\right)^2 + \left(\frac{1}{2}\right)^2$$

$$\frac{3}{4} + \frac{1}{4} = 1$$

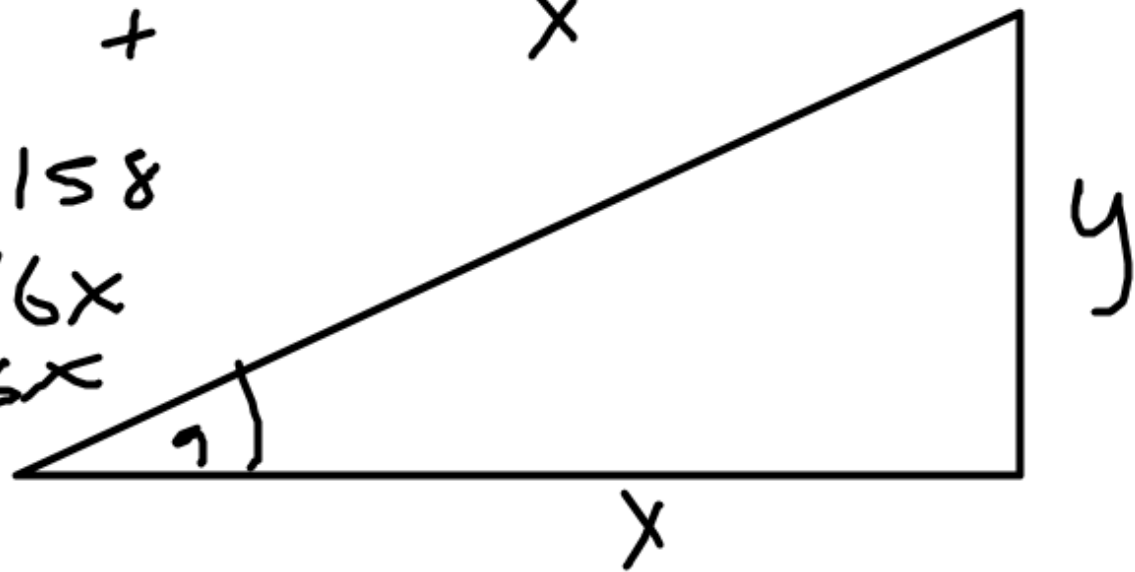
$$\sin^2 \theta + \cos^2 \theta = 1$$



$$\tan \theta \neq \frac{y}{x} \quad (\tan \theta)x = y$$



$$\begin{aligned} & .061 \quad .158 \\ .78 + .06x &= .16x \\ \cdot .06x - .06x & \end{aligned}$$



$$\frac{.78}{.10} = \frac{.10x}{.10}$$

$$7.8 = x$$

$$\tan \theta = \frac{y}{8.1}$$

$$.158 \neq \frac{y}{8.1}$$

Hw pg 276 - 277

57, 60, 62, 64,
65, 66