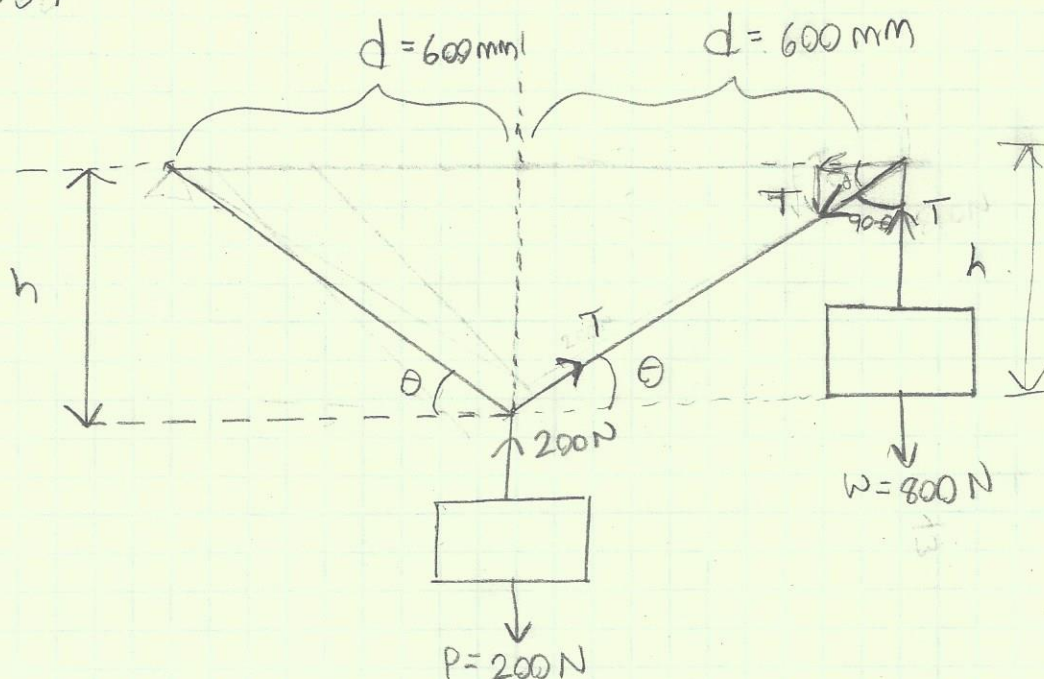


2.54



$$\sum F_y = 2T \sin \theta - 200\text{ N} = 0\text{ N}$$

$$T - 800\text{ N} = 0\text{ N}$$

$$T = 800\text{ N}$$

$$2T \sin \theta = 200\text{ N}$$

$$T \sin \theta = 100\text{ N}$$

$$800\text{ N} \sin \theta = 100\text{ N}$$

$$\sin \theta = \frac{1}{8}$$

$$\theta = \sin^{-1}\left(\frac{1}{8}\right) = 7.2^\circ$$

$$\tan \theta = \frac{h}{600\text{ mm}}$$

$$(\tan 7.2^\circ)(600\text{ mm}) = h$$

$$\boxed{h = 75.6\text{ mm}}$$