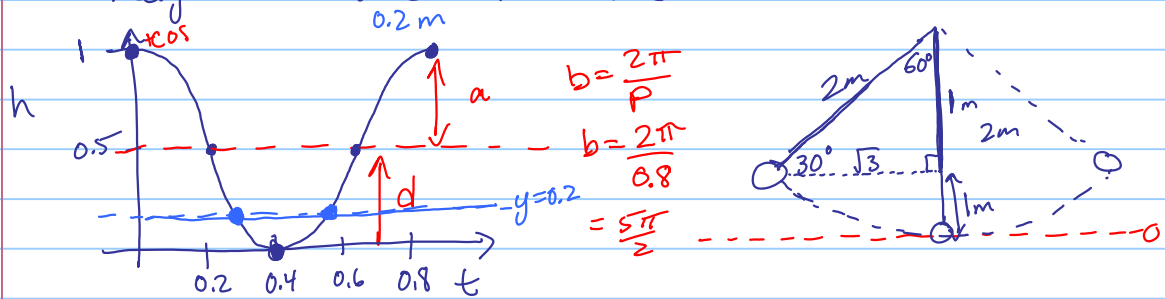


6.7/7.1 Problems & Solving Graphically

Note Title

30/11/2012

A pendulum of length 2m is pulled back to an angle of 60° from vertical and released. If it regains its maximum height for the first time after 0.8 seconds, at what time(s) does it reach a height of 20cm from the bottom?



$$h(t) = \frac{1}{2} \cos \frac{2\pi}{0.8} t + \frac{1}{2}$$

$$t = 0.28s, 0.52s$$

$$\begin{aligned} y_1 &= 0.5 \cos \left(\frac{2\pi x}{0.8} \right) + 0.5 \\ y_2 &= 0.2 \end{aligned}$$

General: $0.28 + 0.8n, 0.52 + 0.8n, n \in \mathbb{Z}$
 ↑
 period