

a) $T_p = 15.5 \text{ sec}$
 $g = 9.8 \text{ m/s}^2$

$$T_p = 2\pi \cdot \sqrt{\frac{L}{g}}$$

so $15.5 \text{ sec} = 2\pi \cdot \sqrt{\frac{L}{9.8 \text{ m/s}^2}}$

$$L = 59.6 \text{ m}$$

b) $L = 59.6 \text{ m}$
 $g = 1.67 \text{ m/s}^2$

$$T_p = 2\pi \cdot \sqrt{\frac{L}{g}}$$

$$= 2\pi \cdot \sqrt{\frac{59.6 \text{ m}}{1.67 \text{ m/s}^2}}$$

$$T_p = 37.5 \text{ sec}$$