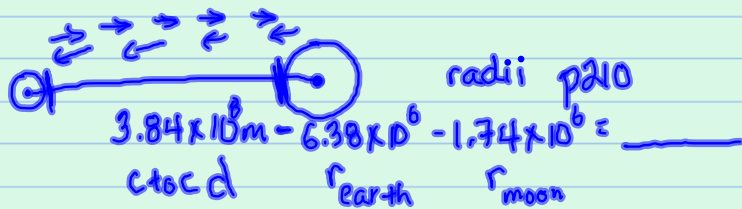


1)  $t = 2.51 \text{ s}$   
 $v = ?$

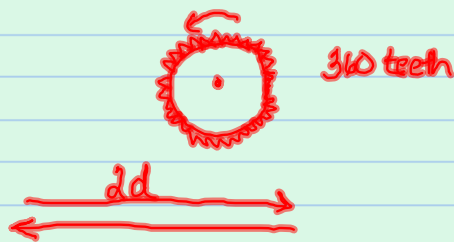
$$v = \frac{d}{t} \quad c = \frac{d}{t} = \frac{2(d)}{2.51} = \frac{3 \times 10^8}{2.51} = \underline{199505976.1 \frac{\text{m}}{\text{s}}}$$



2)

$$c = \frac{2d}{t}$$

angular speed  
 $\omega = 27.5 \frac{\text{rev}}{\text{s}}$   
 omega lower case  $\omega$



$$d = 7500 \text{ m}$$

speed  
 $\omega = \frac{\theta}{t}$   
 angle / time

$$27.5 \frac{\text{rev}}{\text{s}} = \frac{1}{t}$$

$$t = 5.05 \times 10^{-5} \text{ s}$$

$$v = \frac{2(7500)}{5.05 \times 10^{-5}} = 297,029,703 \frac{\text{m}}{\text{s}}$$

$$3 \times 10^8 \frac{\text{m}}{\text{s}}$$