

22-1-032

$$F \Delta t = m v_0 \Rightarrow v_0 = \frac{F \Delta t}{m}$$

velocity after

$$\sum F = -f_u = m a \Rightarrow$$

$$f_u = N r = m g r$$

$$a = -g r$$

$$v(t) = v_0 - g r t = \frac{F \Delta t}{m} - g r t$$

$$\sum \Gamma = f_u r = I \alpha = \frac{2}{5} M R^2 \alpha$$

$$m g r R = \frac{2}{5} M R^2 \alpha$$

$$\alpha = \frac{5 r g}{2 R}$$

$$\omega(t) = \omega_0 + \frac{5 r g}{2 R} t$$

$\omega_0 = 0$ (initial angular velocity is zero)

$$\omega(t) = \frac{5 r g}{2 R} t$$

$v(t) = R \omega(t)$ (no slip condition)

$$\frac{F \Delta t}{m} - g r t = R \frac{5 r g}{2 R} t$$

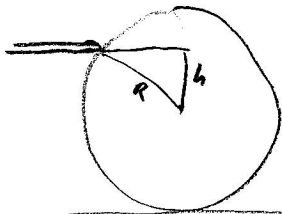
$$\Rightarrow t = \frac{F \Delta t}{g r m \left(1 + \frac{5}{2} \right)} =$$

$$= \frac{2 F \Delta t}{7 g r m}$$

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מש ממה מילי מיון

$$V(t_0) = \frac{F \Delta t}{m} - gR \cdot \frac{2}{7} \frac{F \Delta t}{gRm} = \frac{5}{7} \frac{F \Delta t}{m} = \frac{5}{7} v_0$$



$$F \Delta t = m v_0 \Rightarrow v_0 = \frac{F \Delta t}{m}$$

מילי מיון

$$F \Delta t \cdot h = I \omega_0 = I \omega_0 = \frac{2 F \Delta t h}{5 m R^2}$$

מילי

$$v_0 = \omega_0 R$$

מילי מילי מילי

$$\frac{F \Delta t}{m} = \frac{2 F \Delta t h}{5 m R^2} \cdot R$$

$$h = \frac{5}{2} R$$