Дано

Решение

$$\alpha$$

 $ma = mg \sin \alpha - F_{\tau p}$, $F_{\tau p}R = J\varepsilon$, $J = \frac{mR^2}{2}$, $\varepsilon = \frac{a}{R}$,

$$J = \frac{mR^2}{2}$$

$$F_{\rm TD}R = J\varepsilon$$
,

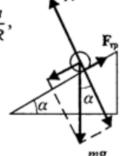
$$\varepsilon = \frac{a}{R}$$

$$F_{\rm tp} = \frac{J\varepsilon}{R} = \frac{mR^2a}{2R^2} = \frac{ma}{2}, \quad ma = mg\sin\alpha - \frac{ma}{2},$$

$$ma = mg\sin\alpha - \frac{ma}{2},$$

$$\frac{3}{2}a = g\sin\alpha$$

$$\frac{3}{2}a = g \sin \alpha , \qquad a = \frac{2}{3}g \sin \alpha .$$



$$Om em a = \frac{2}{3} g \sin \alpha.$$