

ALTERNATIVE APPROACH

$$d = r_p - r_g$$

$$\sum M_G = I_G \alpha$$

$$\sum M_G = m k_g^2 \alpha$$

$$[F d + A_x r_g = m k_g^2 \alpha]$$

$$\sum F_x = m a_{Gx}$$

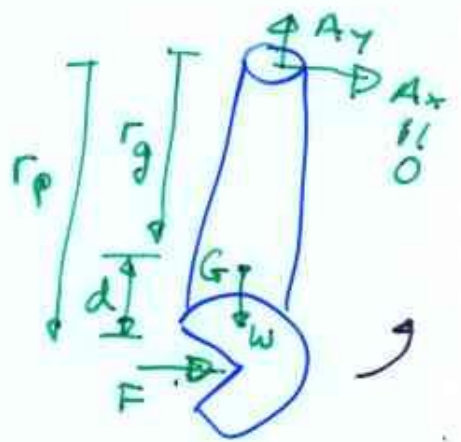
$$F = m a_{Gx}$$

$$[F = m r_g \alpha]$$

$$m r_g \alpha d = m k_g^2 \alpha$$

$$d = \frac{k_g^2}{r_g}$$

$$r_p = r_g + d = r_g + \frac{k_g^2}{r_g}$$



Kinematics

$$a_{Gx} = r_g \alpha$$