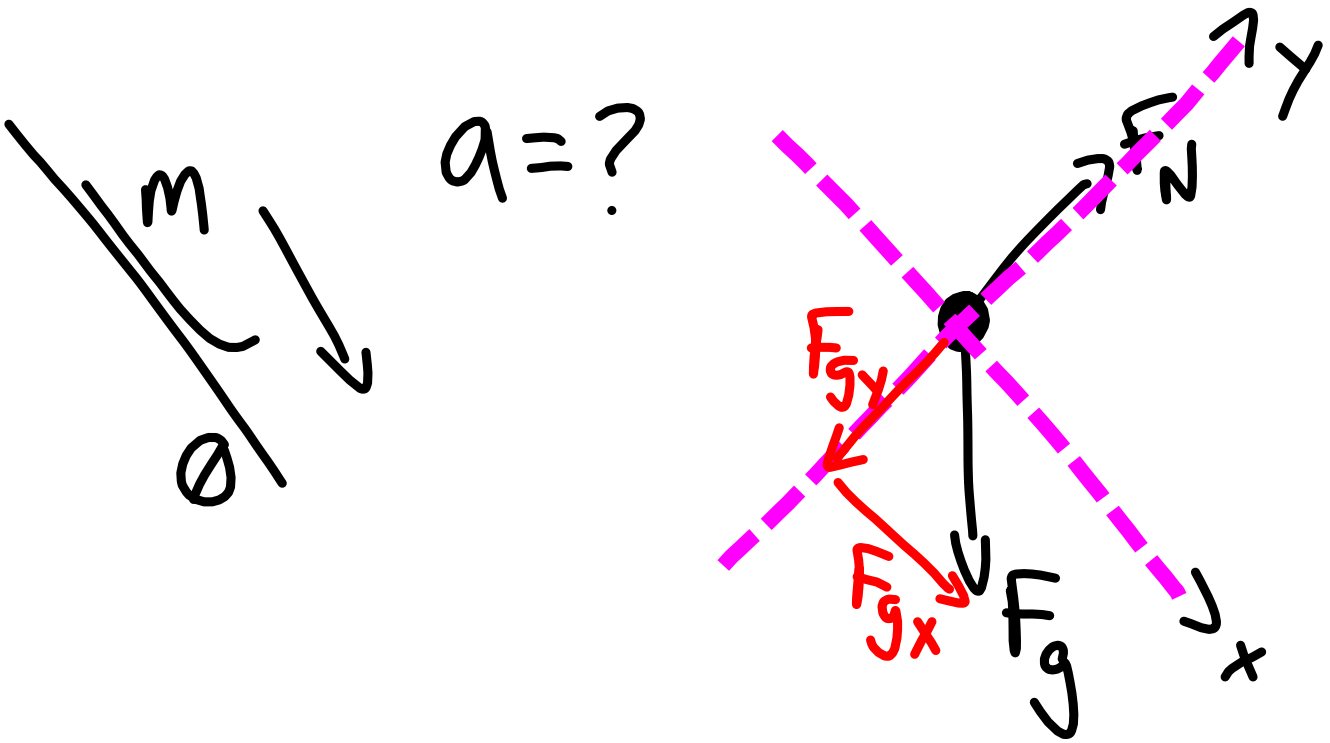
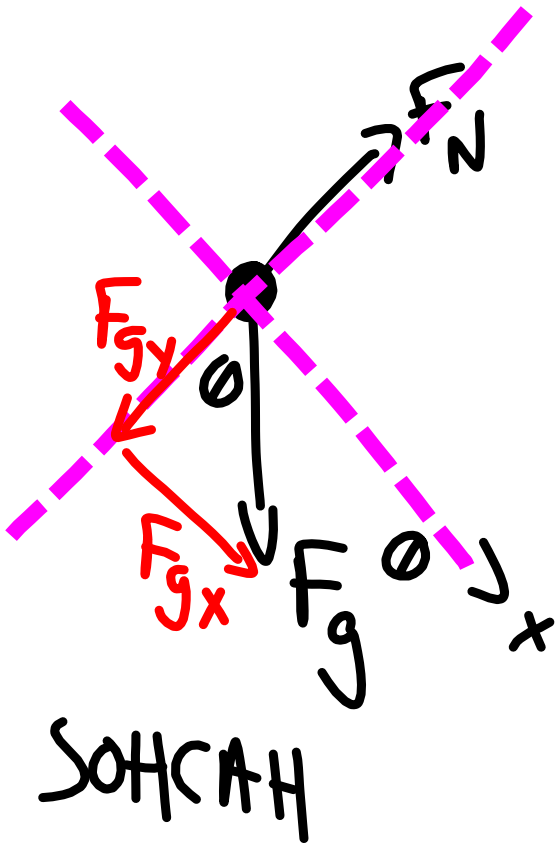

m
θ
a = ?
y
x
$\vec{F}_N$
F_{gy}
F_{gx}
F_g



SOHCAH

$$\Sigma \vec{F}_y = F_N - F_{gy} = 0$$

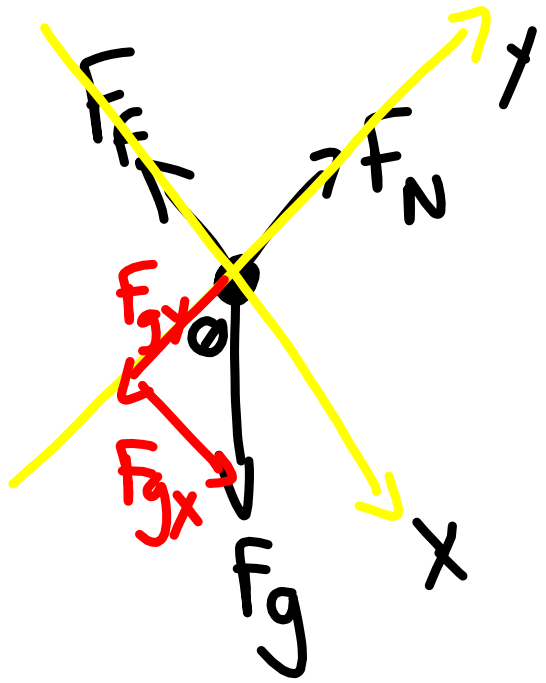
$$F_N = F_{gy}$$

$$\Sigma \vec{F}_x = F_{gx} = ma$$

$$mg\sin\theta = ma$$

$$g\sin\theta = a$$

(2)



$$\Sigma \vec{F}_x = F_{gx} - F_F = ma$$

$$mg\sin\theta - \mu F_N = ma$$

$$mg\sin\theta - \mu F_g\cos\theta = ma$$

$$mg\sin\theta - \mu mg\cos\theta = ma$$

$$g\sin\theta - \mu g\cos\theta = a$$

$$g(\sin\theta - \mu\cos\theta) = a$$

$$\Sigma \vec{F}_y = F_N - F_{gy} = 0$$

$$F_N = F_{gy}$$

$$F_N = F_g\cos\theta$$