

## GET YOUR CLICKER

### REVIEW FOR TEST TOMORROW

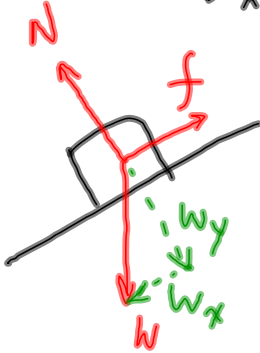
- NOT TAKE HOME
- 10 M.C. & 3 PROBLEMS (HW QUIZ LEVEL)
- OPEN NOTES, TEXTBOOK & MP
- CHAPTER 5
  - NEWTON'S 3 LAWS
  - 2<sup>ND</sup> LAW - EVERY CONTACT
  - MULTIPLE FORCES ("SLID PULLING")
  - RAIP PROBLEM



$$\theta = ? = \text{Arcsin} \left( \frac{34.5 \text{ cm}}{91.4 \text{ cm}} \right)$$

$$W = 3.82 \text{ lbs} = \underline{\hspace{2cm}} \text{ N}$$

$$\hookrightarrow \times \frac{4.45 \text{ N}}{1 \text{ lb}} = 17.0 \text{ N}$$



DRAW FBD

$$\sum F_x = \text{max}$$

$$W_x - f = \text{max}$$

$$W \sin \theta - f = 0$$

NOT MOVING  
OR  
MOVING w/  
CONST. SPEED

$$W \sin \theta - f = \text{max}$$

ACCEL

$$\sum F_y = \text{may}$$

$$N - W_y = \text{may}$$

$$N - W \cos \theta = 0$$

NOT MOVING  
OR CONST. V  
OR ACCEL.

$$f = ? = 6.42 \text{ N}$$

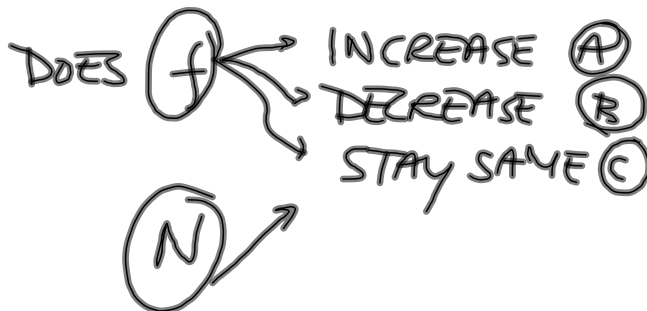
$$f = W \sin \theta$$

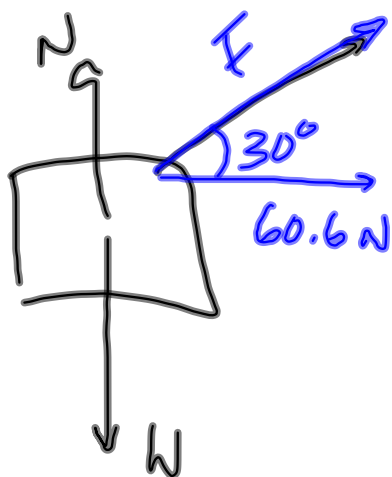
$$= (17.0 \text{ N}) \sin 22.2^\circ$$

$$= 6.42 \text{ N}$$

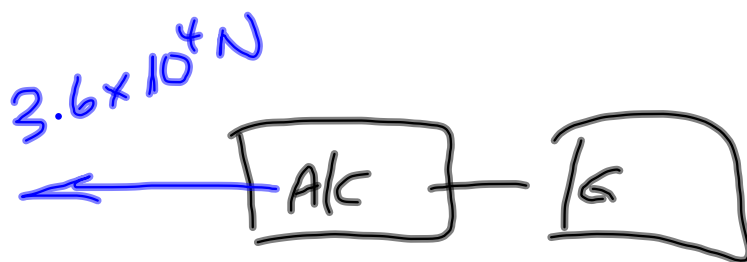
$$N = ? = 15.7$$

IF WE DECREASE THE ANGLE ...





$$\frac{60.6}{F} = \cos \theta$$



$$\Sigma F = ma$$

$$3.6 \times 10^4 \text{ N} = (1.2 \times 10^4 \text{ kg} + 0.6 \times 10^4 \text{ kg})(a)$$

$$a = \frac{3.6 \times 10^4 \text{ N}}{1.8 \times 10^4 \text{ kg}} = 2.0 \text{ m/s}^2$$