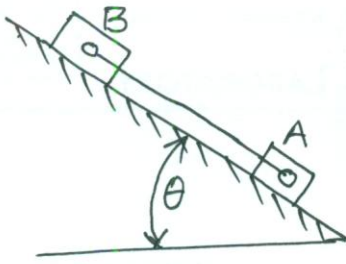


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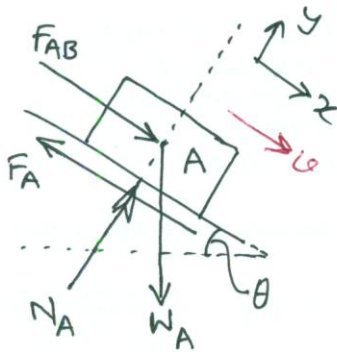
Motion down the plane

$$W_A = W_B = 10 \text{ lb}$$

$$\theta = 30^\circ, a = -1.61 \text{ fps}^2$$

$$F_{AB} = 1 \text{ lb (comp.)}$$

$$f_A = ? \quad f_B = ?$$



From the freebody of A.

$$\Sigma F_y = 0, \text{ +ve } y \text{ direct}^n \text{ as +ve}$$

$$N_A - W_A \cos \theta = 0$$

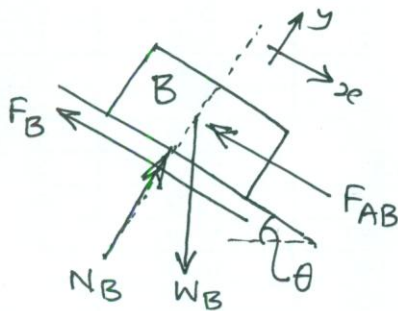
$$\therefore N_A = 10 \cos 30^\circ = 8.66 \text{ lb}$$

Again taking  $\Sigma F_x = ma$ , +x direct<sup>n</sup> as +ve

$$F_{AB} - f_A + W_A \sin \theta = \frac{W_A}{g} a$$

$$\Rightarrow 1 - 8.66 \times f_A + 10 \sin 30^\circ = \frac{10}{32.2} \times (-1.61)$$

$$\therefore f_A = \boxed{0.75} \text{ Ans.}$$



From the freebody of B

$$\Sigma F_y = 0, \text{ +y as +ve}$$

$$N_B - W_B \cos \theta = 0$$

$$\therefore N_B = 10 \cos 30^\circ = 8.66 \text{ lb}$$

$$\Sigma F_x = ma, \text{ +x as +ve}$$

$$-F_{AB} - f_B + W_B \sin \theta = \frac{W_B}{g} a$$

$$\Rightarrow -1 - 8.66 \times f_B + 10 \sin 30^\circ = \frac{10}{32.2} \times (-1.61)$$

$$\therefore f_B = \boxed{0.52} \text{ Ans.}$$