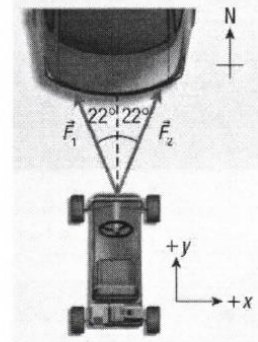
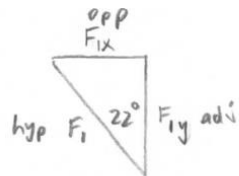
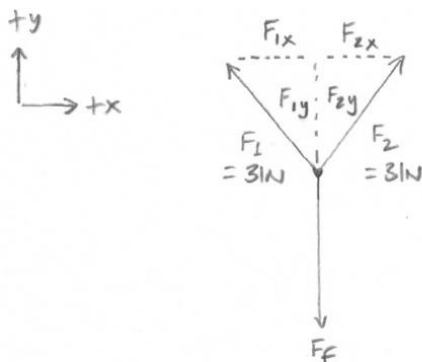


Errata Nelson Physics 12 Chapter 2

Section 2.1 – Sample Problem #2 – pg. 67 (incorrect answer, sine and cosines are flipped)



x-component

$$\begin{aligned} F_{1x} &= -F_1 \cdot \sin \theta \\ &= -(31) \cdot \sin 22 \\ &= -11.61 \text{ N} \end{aligned}$$

$$\begin{aligned} F_{2x} &= F_1 \cdot \sin \theta \\ &= 31 \cdot \sin 22 \\ &= 11.61 \text{ N} \end{aligned}$$

$$\begin{aligned} \Sigma F_x &= F_{1x} + F_{2x} + F_{fx} \\ 0 &= -11.61 + 11.61 + F_{fx} \end{aligned}$$

no net force $0 = F_{fx}$
on the go-cart

\therefore Forces in the
x-direction will cancel

y-component

$$\begin{aligned} F_{1y} &= F_1 \cdot \cos \theta \\ &= 31 \cdot \cos 22 \\ &= 28.74 \text{ N} \end{aligned}$$

$$\begin{aligned} F_{2y} &= F_1 \cdot \cos \theta \\ &= 31 \cdot \cos 22 \\ &= 28.74 \text{ N} \end{aligned}$$

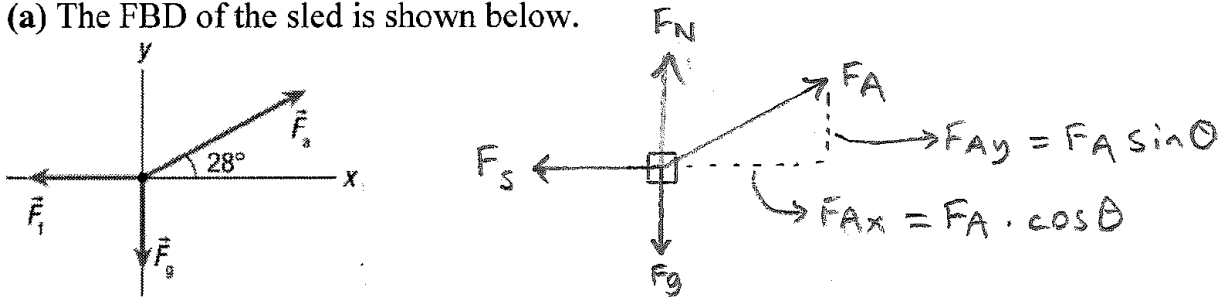
$$\begin{aligned} \Sigma F_y &= F_{1y} + F_{2y} + F_{fy} \\ 0 &= 28.74 + 28.74 + F_{fy} \\ -57.48 \text{ N [N]} &= F_{fy} \end{aligned}$$

$$\therefore F_{fy} = 57.48 \text{ N [S]}$$

Section 2.1 – Review – pg. 69 (incorrect FBD)

9. Given: $\vec{F}_a = 55 \text{ N}$ [forward 28° up]; $\vec{F}_g = 120 \text{ N}$; $\Sigma \vec{F} = 0 \text{ N}$

(a) The FBD of the sled is shown below.



Section 2.3 – Tutorial 2 Practice #6 – pg. 82 (incorrect answer)

$$\vec{F}_T = (4.2 \text{ kg}) \left(9.8 \frac{\text{m}}{\text{s}^2} + 5.302 \frac{\text{m}}{\text{s}^2} \right)$$

$$\vec{F}_T = 63 \text{ N}$$

Statement: The tension in the string is 63 N.