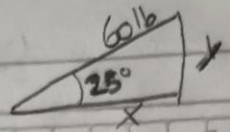
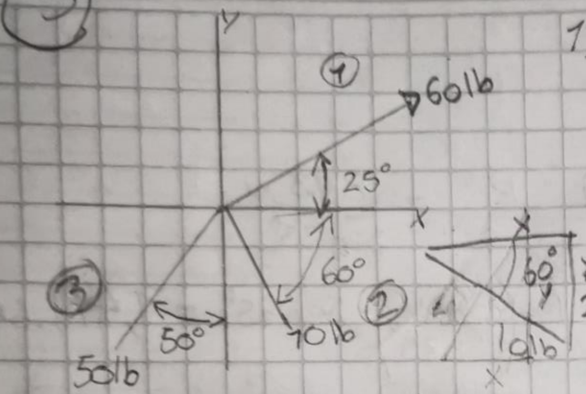


3



1) $\text{sen } \theta = \frac{co}{H}$

$y = 60lb \times \text{sen}(25°) \Rightarrow 25,36\ lb$

$\cos \theta = \frac{ca}{H}$ $\quad \cos \theta = \frac{x}{60lb}$

$x = 60lb \times \cos(25°) \Rightarrow 54.38lb$

2) $\text{sen } \theta = \frac{co}{H}$

$x = 43lb \times \text{sen}(-60°) \Rightarrow 73.18lb$

$\cos \theta = \frac{ca}{H}$ $\quad \cos \theta = \frac{x}{50lb}$

$x = 43lb \times \cos(-60°) \Rightarrow = 40.95lb$

3) $\text{sen } \theta = \frac{co}{H}$

$y = 50lb \times \text{sen}(-140°) = -49,012$

$x = 50lb \times \cos(-140°) = -9,9$

	componente x	componente y
1	+60lb cos(25°) +54,38lb	+60lb sen(25°) +25,36lb
2		
3		

$Rx = (54.38lb) + (40.95lb) + (-9,9) =$

$= 85,43$

$Ry = (25,36) + (13,17) + (-49,012)$

$= -10,542$

$R = \sqrt{Rx^2 + Ry^2}$

$R = \sqrt{(85,43)^2 + (-10,542)^2}$

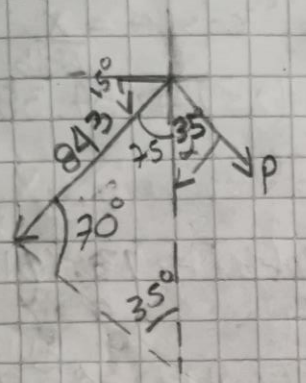
$R = 796.56$

$\vec{R} = 196.56$

cedula : 1006 907 843

Parcial

1.



a) $\frac{P}{\text{sen } 75°} = \frac{843\,N}{\text{sen } 35°}$

$P = \left(\frac{843\,N}{\text{sen } 35°}\right) \cdot \text{sen } 75° = 1{,}419.64\,N$

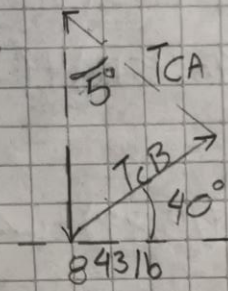
b) $\frac{P}{\text{sen } 70°} = \frac{843\,N}{\text{sen } 35°}$

$P = \left(\frac{843\,N}{\text{sen } 35°}\right) \text{sen } 70° = 1{,}381.09$

a. R/ La fuerza resultante P del carrito es 1,419.64 N

b. R/ La Magnitud es de 1,381.09

2.



a) $TBC \cos 40° = TAC \text{ sen } 5°$

$TBC = \frac{TAC \cdot \text{sen } 5°}{\cos 40°}$

$TBC = \frac{1070.26 \cdot \text{sen } 5°}{\cos 40°} = 1{,}538.91 \text{ lb}$

b) $TAC \cos 5° - \frac{TAC \cdot \text{sen } 5° \cdot \text{sen } 40°}{\cos 40°} = 843 \text{ lb}$

$TAC \cdot \cos 5° - TAC \cdot \text{sen } 5° \text{ Tan } 40° = 843 \text{ lb}$

$TAC = (\cos 5° - \text{sen } 5° \cdot \text{Tan } 40°) = 843 \text{ lb}$

$TAC = \frac{843 \text{ lb}}{\cos 5° - \text{sen } 5° \cdot \text{Tan } 40°} = 1{,}070.26 \text{ lb}$

$TBC = 1{,}538.91 \text{ lb}$

$TAC = 1{,}070.26 \text{ lb}$

0,788