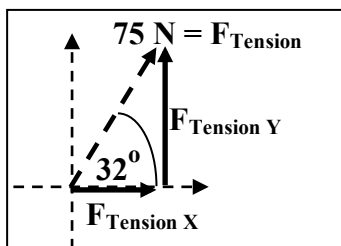


Determine the x and y components of each of the force vectors below. Show work. Pay attention to when something should be negative. **Make sure your calculator is in degrees.** **USE PENCIL!!!! Draw in the vectors for F_x and F_y on the diagram.**

Here is an example of what should be written for the equations.



Finding Opposite side of triangle – Sine: Opposite Side = Hypotenuse * Sin (Angle)

$$F_{\text{Tension } Y} = F_{\text{Tension}} * \sin \theta$$

$$F_{\text{Tension } Y} = 75 \text{ N} * \sin (32^\circ)$$

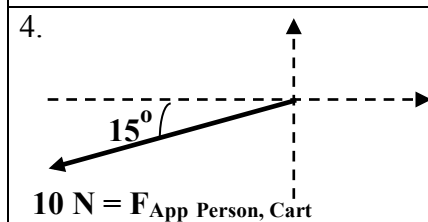
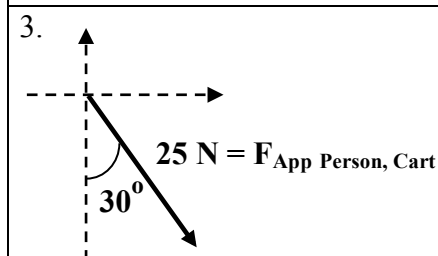
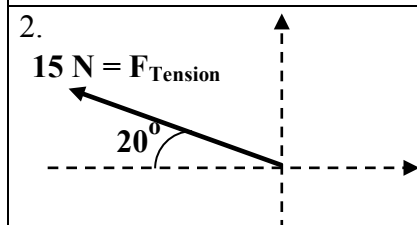
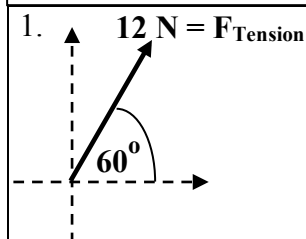
$$F_{\text{Tension } Y} = 39.7 \text{ N}$$

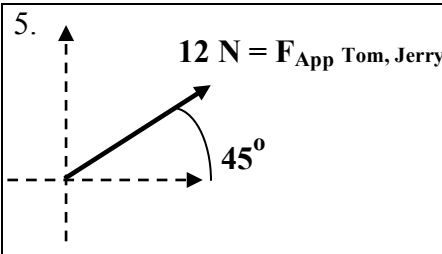
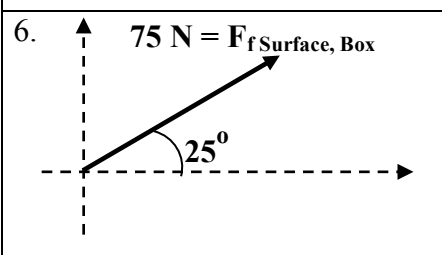
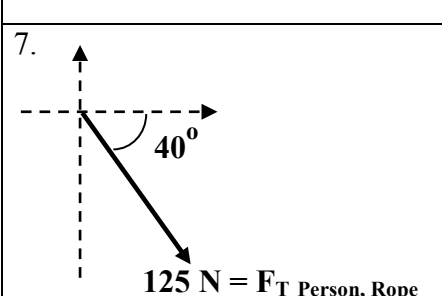
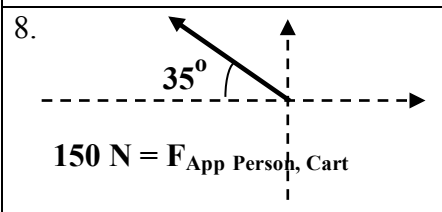
Finding Adjacent side of triangle – Cosine: Adjacent = Hypotenuse * Cos (Angle)

$$F_{\text{Tension } X} = F_{\text{Tension}} * \cos \theta$$

$$F_{\text{Tension } X} = 75 \text{ N} * \cos (32^\circ)$$

$$F_{\text{Tension } X} = 63.6 \text{ N}$$



5.		
6.		
7.		
8.		

9. What is the Resultant Force (magnitude and direction) if you combined the answers from problems 1-8?

	F _x	F _y
1		
2		
3		
4		
5		
6		
7		
8		
Total		