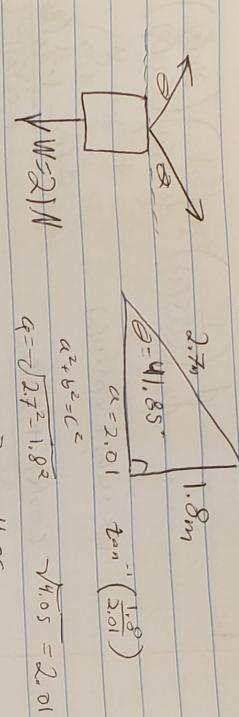


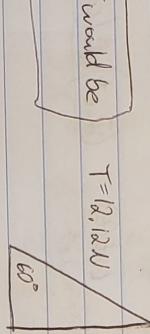
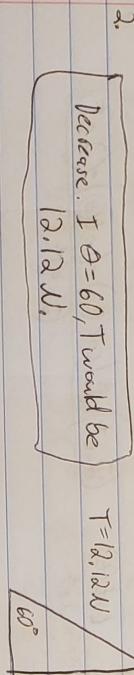
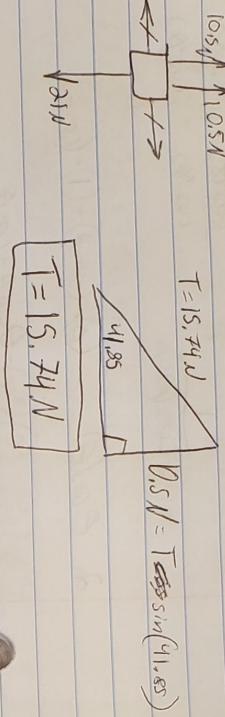
PHYS 407

HW#3

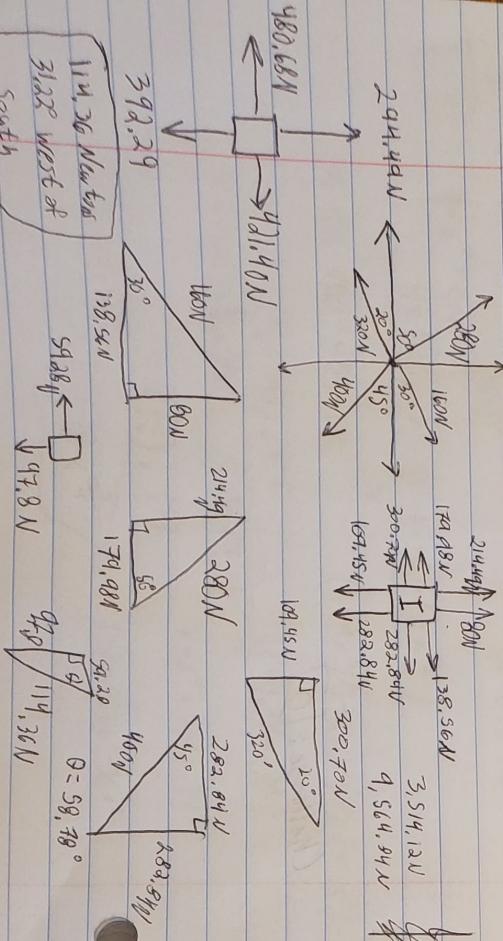


$$\sqrt{W^2 - 2^2} = 2.01$$

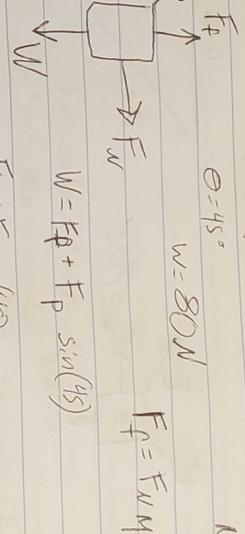
$$T = \sqrt{2.01^2 - 2^2} = \sqrt{4.05} = 2.01$$



3.



4.



$\theta = 45^\circ$

$\mu = 0.6$

$f_k = \mu N$

$F_f = F_N$

$f_k = \mu N$

$N = 80N$

$\mu = 0.6$

$\theta = 45^\circ$

$w = 80N$

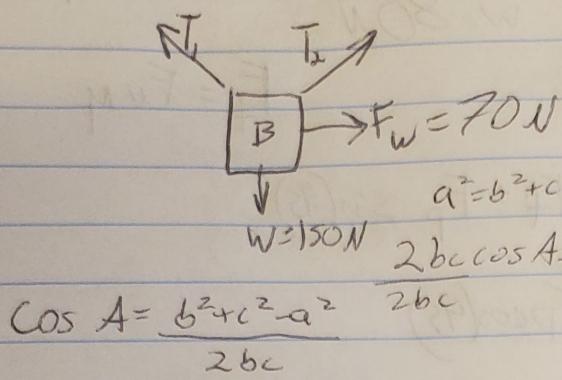
$f_k = \mu N$

$N = 80N$

$\mu = 0.6$

HW #5

7.



$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$\frac{2bc \cos A}{2bc} = \frac{b^2 + c^2 - a^2}{2bc}$$

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$$A = \cos^{-1} \left(\frac{b^2 + c^2 - a^2}{2bc} \right)$$

$$\left(\cos B = \frac{a^2 + c^2 - b^2}{2ac} \right) \cos^{-1} \rightarrow B = \cos^{-1} \left(\frac{a^2 + c^2 - b^2}{2ac} \right) \quad 0.64 + 0.36 - 1.44$$

$$\frac{-0.44}{2(0.8)(0.6)} \rightarrow \frac{0.44}{0.96} \# 117.28^\circ = B$$

$$\cos^{-1} \left(\frac{1.16}{1.44} \right)$$

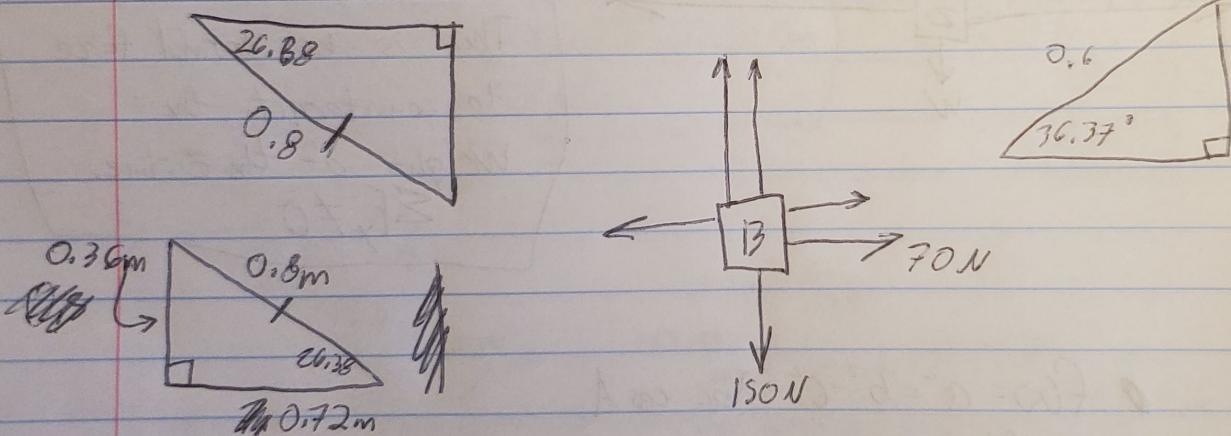
$$C = \cos^{-1} \left(\frac{a^2 + b^2 - c^2}{2ab} \right)$$

$$0.64 + 1.44 - 0.36 = 1.72$$

$$C = 26.38^\circ$$

$$\frac{1.72}{1.92} \#$$

$$A = 36.37^\circ$$



$$T_1 = 392.18N$$

$$T_2 = 229.47N$$

$$F_{up} = 150N = T_1 \sin 26.38^\circ + T_2 \sin 36.37^\circ$$

$$F_{right} = 70N + T_2 \cos 36.37^\circ = T_1 \cos 26.38^\circ$$

$$T_1 = \frac{70 + T_2 \cos 36.37^\circ}{\cos 26.38^\circ}$$

$$150 = \left(\frac{70 + T_2 \cos 36.37^\circ}{\cos 26.38^\circ} \right) \sin 26.38^\circ + T_2 \sin 36.37^\circ$$

	names					companies			
	Athios	Dreadco	Gralax	Worul		Omnipax	Permias	SpaceZen	Ubersplore
months	X	X	X	X	X	X	X	X	O
January	X	X	X	X	X	X	X	X	O
February	X	X	X	O	X	O	X	X	X
March	X	X	X	O	X	X	X	O	X
April	X	O	X	X	X	X	O	X	X
Omnipax	X	X	O	X	X				
Permias	X	O	X	X	X				
SpaceZen	X	X	X	X	O				
Ubersplore	O	X	X	X	X	X			