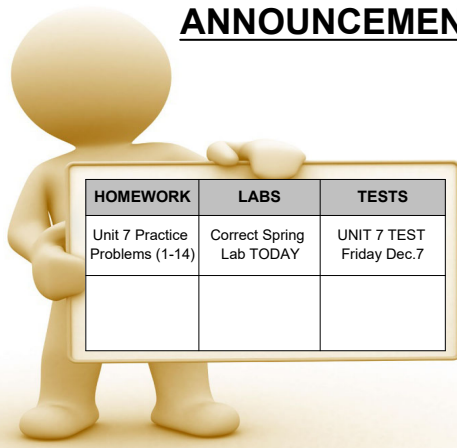


SPRING LAB

SECTION	EVALUATION	POINTS EARNED
TITLE	Title of lab is present and labeled	
PURPOSE	Purpose of lab is labeled and clearly written in a complete sentence	
HYPOTHESIS	Hypothesis of lab is labeled and clearly written in a complete sentence	
MATERIALS	Materials of lab are labeled and clearly listed	
DATA AND CALCULATIONS	Data is clearly labeled and appropriately displayed through tables or charts Graphs and/or calculations are clearly labeled and contain appropriate units	
CONCLUSION	Purpose of lab is restated Findings are verified with 3 or more results including important numerical values and their significance Counterclaim is provided to address specific experimental error and provide possible experimental improvements Specific real-world applications are given to provide importance of the experimental process	

TOTAL 20

ANNOUNCEMENTS



7.5 Translational Equilibrium

LEARNING TARGETS

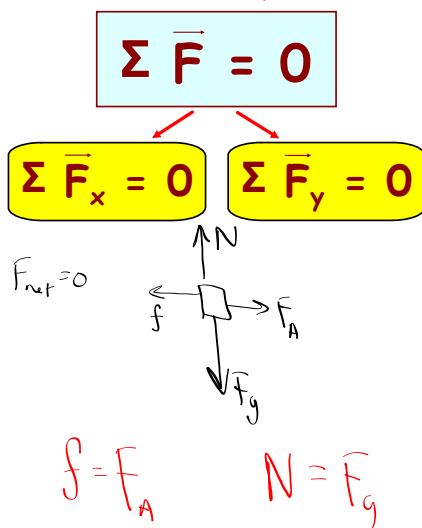
7.3 I can define, analyze, and solve dynamic problems involving tension forces and connected objects.

Translational Equilibrium

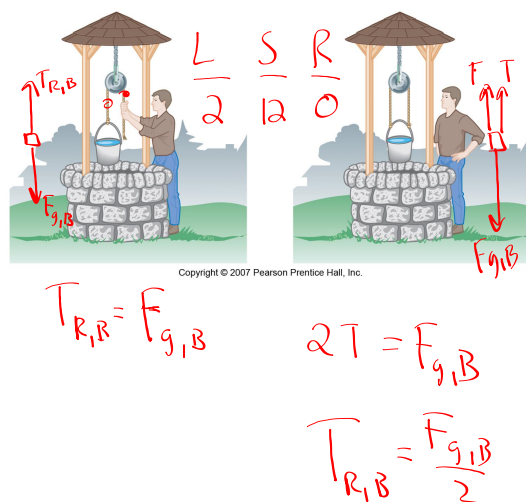
When an object is in translational equilibrium, the net force acting on it is zero.

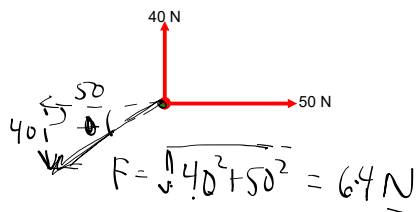
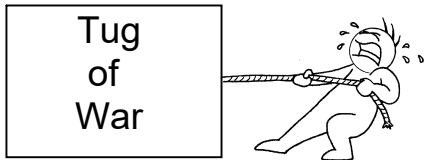


Translational Equilibrium



Translational Equilibrium





$$\theta = \tan^{-1}\left(\frac{40}{50}\right) = 39^\circ \text{ below } -x \text{ axis}$$

Equilibrant Force

A force that puts an object in equilibrium is called the **equilibrant force**.

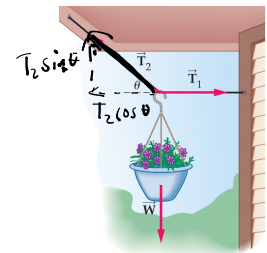
Suspended Vegetation

To hang a 6.20 kg pot of flowers, a gardener uses two wires - one attached horizontally to a wall, the other sloping upward at an angle of $\theta = 40.0^\circ$ and attached to the ceiling. Find the tension in each wire.

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$$72.4 \text{ N} = T_1$$

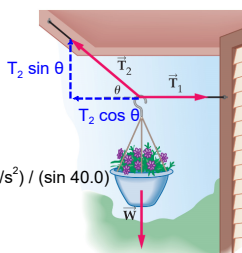
$$T_2 \sin \theta = F_g$$

$$T_2 \sin \theta = mg$$

$$T_2 = mg / \sin \theta$$

$$T_2 = (6.20 \text{ kg})(9.8 \text{ m/s}^2) / (\sin 40.0)$$

$$T_2 = 94.5 \text{ N}$$



PRACTICE

UNIT 7 PROBLEMS

(15-16)