Name ____________________________

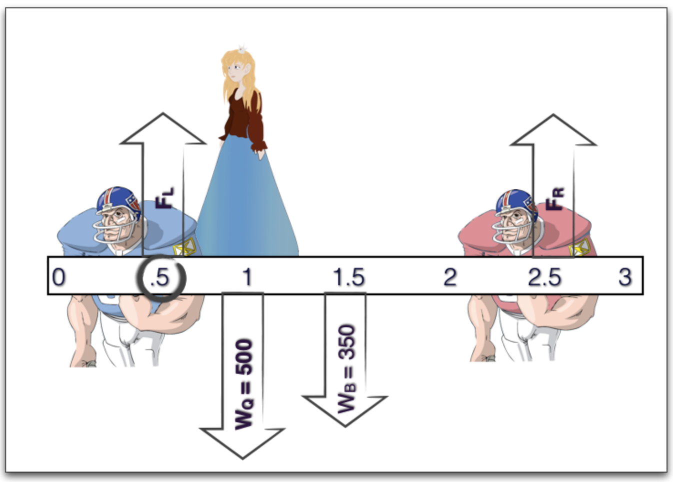
Torque

T = F d sinθ

What does each part of this equation mean?
What units?

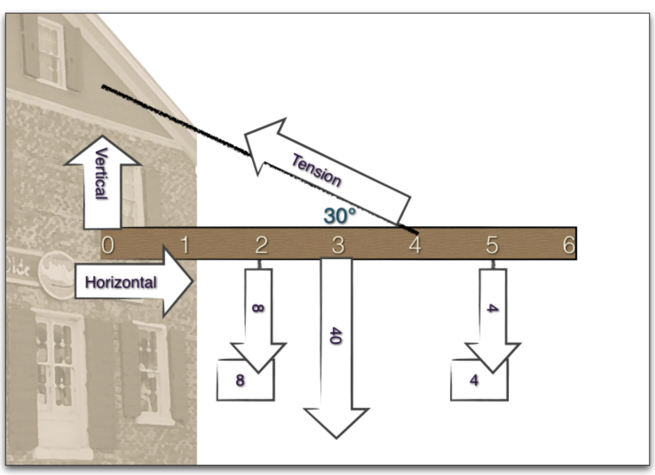
Left = Right **clockwise = counterclockwise**

up = Down



-what equations can be used to solve this type of example?

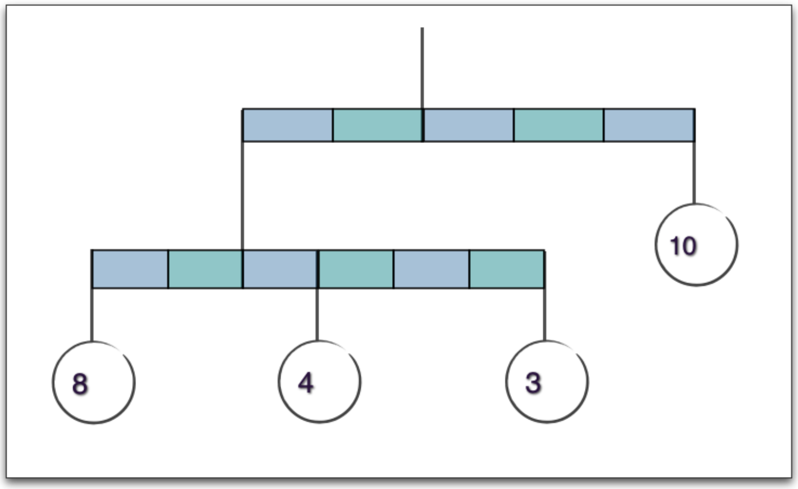
-why is there a circle under the one player?



-what equations can be used to solve this type of example?

-why is this one different from the above example?

Stay balanced, there's no turning around now.



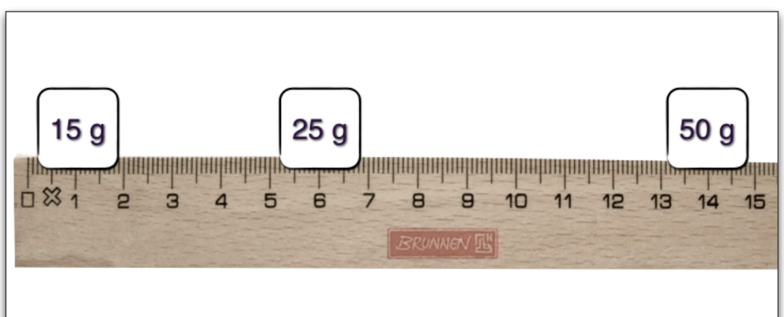
-what method can be used to solve this type of example?

-why were some more challenging than others?

Center Of Mass

$$x_{cm} = \frac{x_1 m_1 + x_2 m_2 + x_3 m_3}{m_{total}}$$

What does each part of this equation mean? What units?



-describe what you are finding in this example

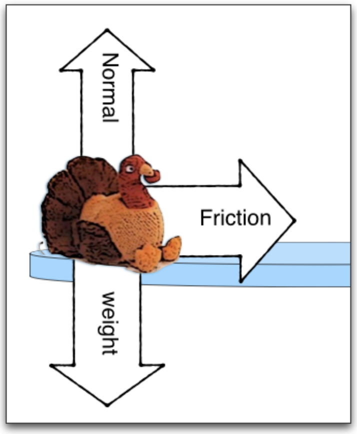
-what if things aren't all in one line?

Stay balanced, there's no turning around now.

Centripetal Force

$$F_c = \frac{mv^2}{r}$$

What does each part of this equation mean? What units?

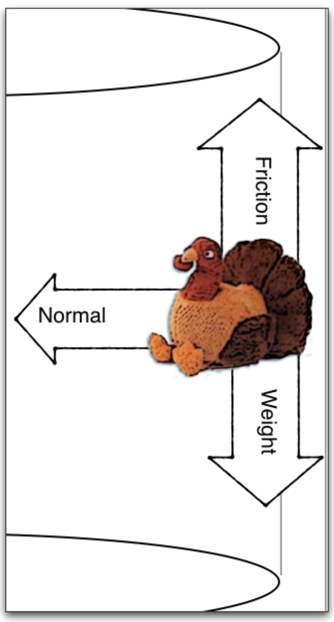


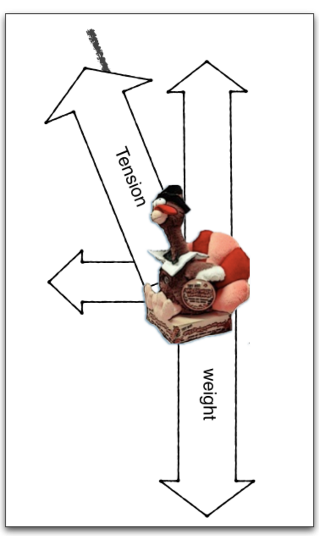
-what equations can be used to solve this type of example?

$$a_c = \frac{v^2}{r}$$

What does each part of this equation mean? What units?

-what equations can be used to solve this type of example?



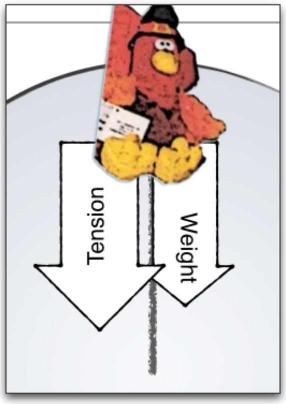


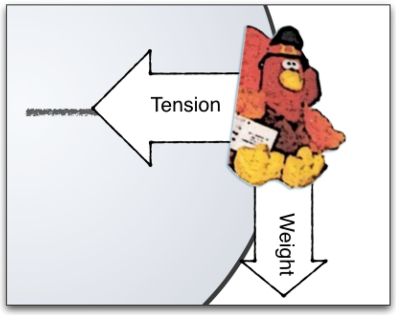
-what equations can be used to solve this type of example?

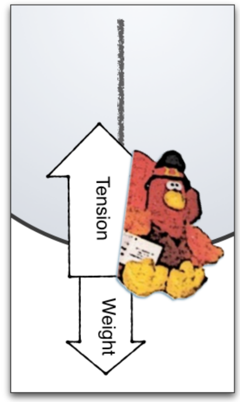
-what is the difference between centripetal and centrifugal?

Stay balanced, there's no turning around now.

 Name ____________________________



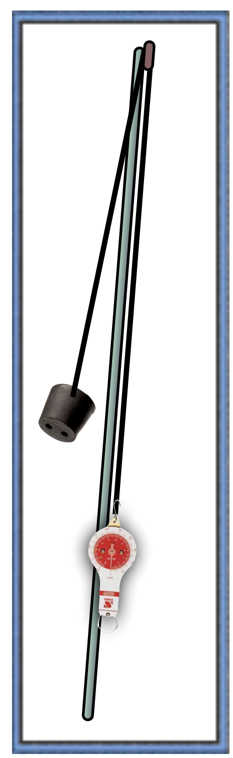




-what equations can be used to solve these 3 examples?

what is the minimum speed if the radius is 1 meter?

Radius (in m)	**Force** (in N)	**Time** (20 rev)	**Period** (1 rev)	**velocity** (m/s)	v^2 (m^2/s^2)



How did you get each value for this table during your lab experiment?

Stay balanced, there's no turning around now.

Name ___________________________

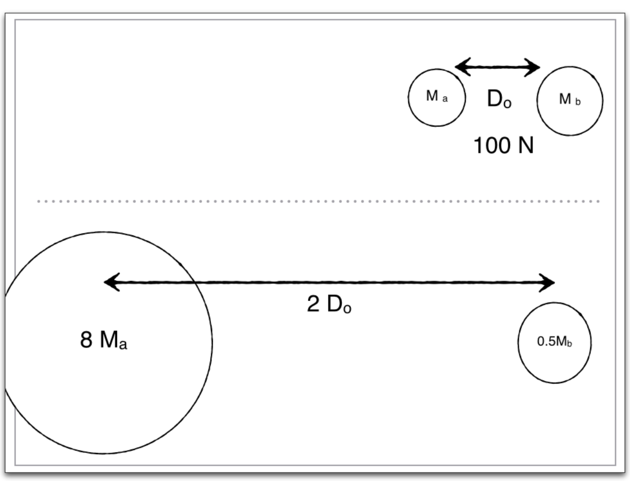
Universal Gravity

$$F_g = \frac{GMm}{r^2} \qquad G = 6.67x10^{-11}\, Nm^2/kg^2$$

What does each part of this equation mean? What units?

5.97x10^{24} kg *Mass of the Earth*
7.24x10^{22} kg *Mass of the Moon*
3.84x10^{8} m *radius of lunar orbit*
6.371x10^{6} m *radius of the Earth*

What does Gm/r^2 equal if you use the mass and radius for the earth?



-what method can be used to solve this type of example?

what would be the result of making the distance 5 times smaller?

Stay balanced, there's no turning around now.