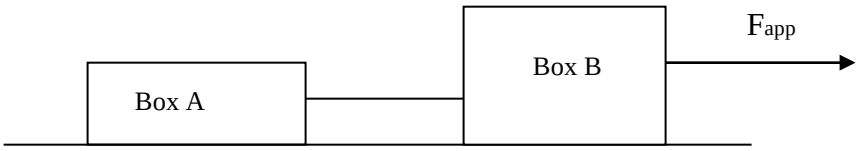
NEWTON'S THIRD LAW: *Action & Reaction*

1. Find the action and reaction forces between a 10 kg box and a 16 kg box accelerating together on a frictionless table by a force of 40 N acting on one of them.

2. Repeat #1 assuming that there is a force of friction of 5.0 N acting on the first box (the one on which the 40 N force is exerted), and a force of friction of 8.0 N acting on the second box.

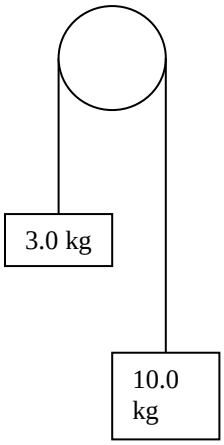
3. Determine the force on Box A from Box B and the tension in the rope if F_{app}= 50 N, Box A=10 kg, Box B=15 kg.



4. Determine the force on Box A from Box B and the tension in the rope if F_{app}= 100 N, Box A =35 kg, Box B = 15 kg.

5. Assume Box C is inserted between Box A and Box B. Draw a diagram of this. Find the tension in both sections of the rope if F_{app}= 100 N, Box A =15 kg, Box B = 15 kg, Box C = 20 kg.

6.



7. Repeat #6 using a 4.0 kg mass and a 6.0 kg mass.

Homework:

1. Repeat practice #3 using a 2.0 kg and a 4.0 kg block on the table, and $\mu = 0.2$ and Fapp = 40N.
2. Using the above masses, what value of μ will produce too much friction for the object to move?
3. Repeat practice #6 using a 10.0 kg mass and a 12.0 kg mass.