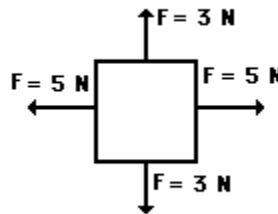
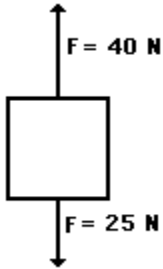


Levers Practice Quiz Activity Sheet for Students 1.6a

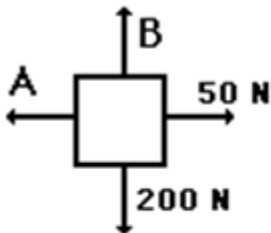
Name \_\_\_\_\_

**Levers Practice Quiz** (ICP.3.2, 3.5, 3.7, 4.4)

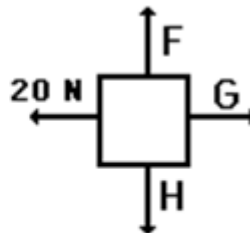
1. Free-body diagrams for four situations are shown below. For each situation, determine the net force acting upon the object.



2. Free-body diagrams for four situations are shown below. The net force is known for each situation. However, the magnitudes of a few of the individual forces are not known. Analyze each situation individually and determine the magnitude of the unknown forces.



$F_{\text{net}} = 0 \text{ N}$



$F_{\text{net}} = 30 \text{ N, right}$

3. How much work does Purdue Pete do while moving a gigantic drum 20 meters with a pulling force of 200N?
4. A machine uses an input force of 200 N to produce an output force of 800 N. What is the mechanical advantage of this machine?

5. A 42 inch lever with a fulcrum in the middle is sitting on a table. If a 60 g hex nut sits 7.5 inches from the fulcrum, where must a 25 g hex nut be placed to balance the lever?
  
6. What mass of a single hex nut must be placed at the end of lever in problem 5 to make the 60 g hex nut balance?
  
7. Draw the missing arrow (vector) and state the reaction to the given action.



Hand pulls on flower

a. \_\_\_\_\_