

FORCES: UNDERSTANDING CHECK

1. What is a Force?

2. Fill out the chart

| Type of Force | Does it result in motion? (Y/N) | Does it result in a net force? (Y/N) | Direction of the 2 forces (same or opposite?) |
|---------------|---------------------------------|--------------------------------------|---|
| Balanced | | | |
| Unbalanced | | | |

3. How are the following forces combined? (Do you add them or subtract them?)

a) two forces pushing in the same direction _____

b) two forces pulling in the same direction _____

c) two forces pushing in opposite directions _____

5. Answer the following questions: (Note: **THE SI UNIT FOR FORCE IS THE NEWTON (N)**)

a) The force pushing to the left is 100N, the force pushing to the right is 35N. What is the net force, and in what direction is it?

b) Two students are competing in a tug of war. One pulls to the left with a force of 20N. One pulls to the right with a force of 25N. What is the **net force** and in what direction is it?

c) Two students are working together to push a box across the floor. One pushes with a force of 50N, the other with a force of 25N. What is the **net force**? In what direction is the force?

d) The Central Staff vs. Students tug of war is taking place. Five from each side compete. The staff is pulling to right with forces of 130N, 110N, 160N, 125N, 90N. Four students are pulling with forces of 140N, 135N, 80N, 110N. What force must the last student be pulling with to give the lead to the students' team?