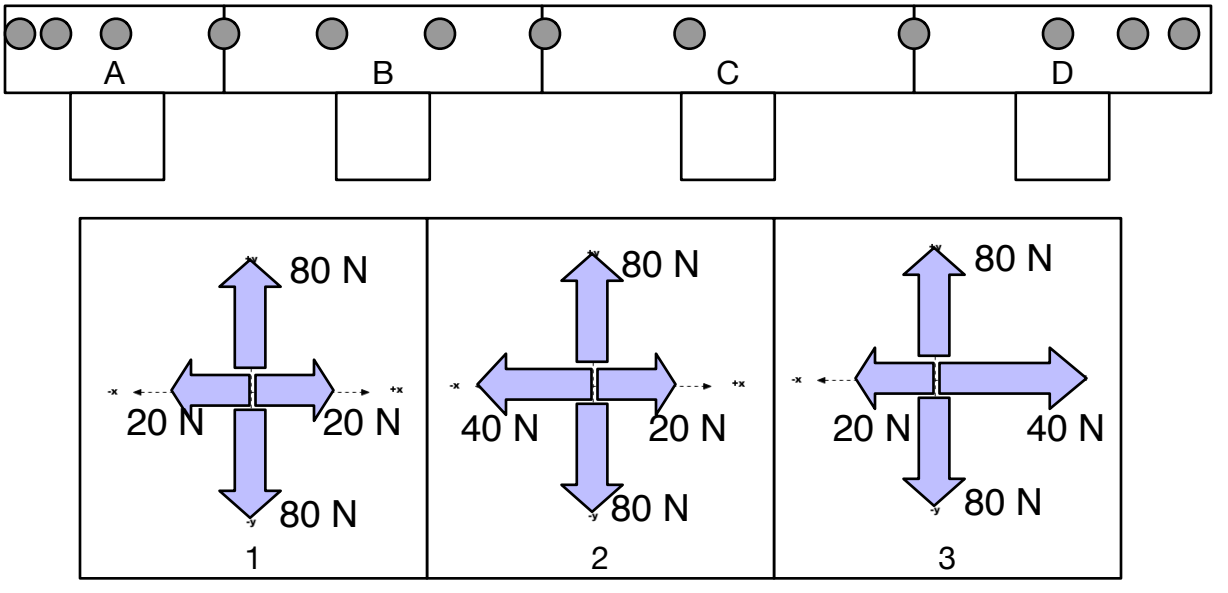
Cycle 6 Forces Assessment

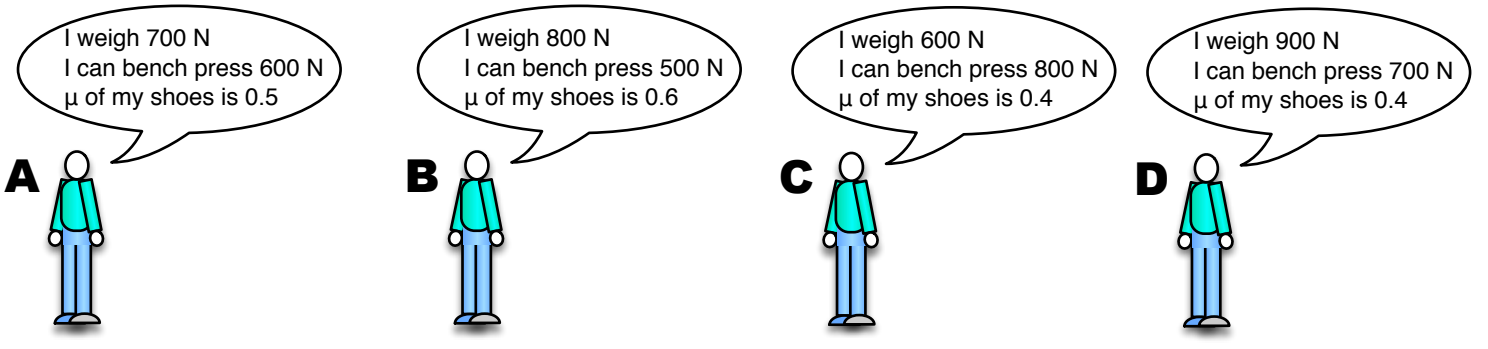
Understanding Review

1. What is one similarity between Friction and Drag? What is one difference?

2. Match the different regions of the dot pattern with the correct FBD.

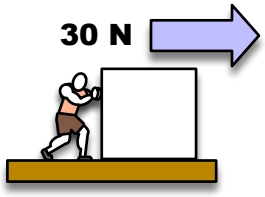


3. Rank the following tug-if-war players in terms of their ability to help win a pep-rally style tug of war.



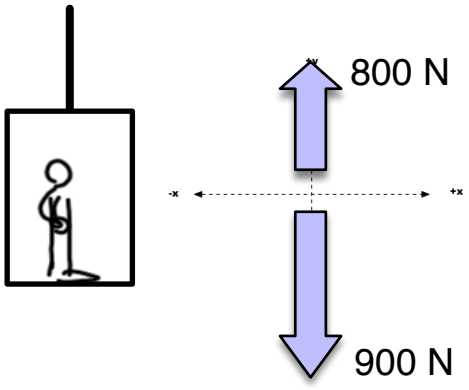
Most helpful					Least helpful

4. Critique the physics of the following statement about the situation shown.



"The box is moving to the right at 30 N."

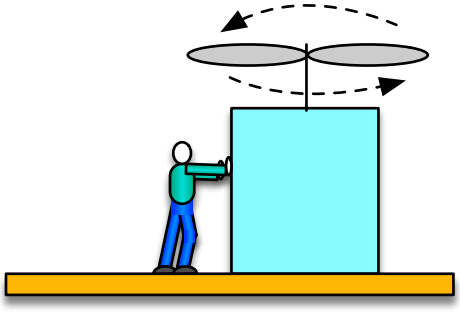
5. Given the FBD for the person in the elevator, which descriptions could be accurate?

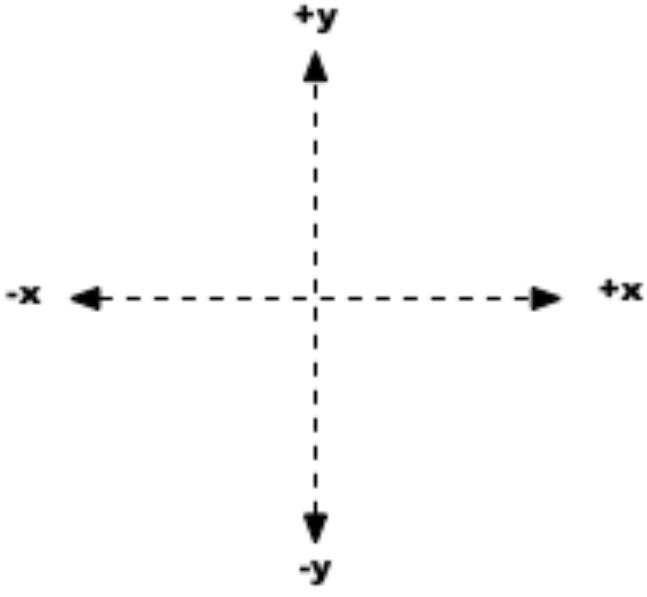


- ☐ Moving upwards at constant speed.
- ☐ Moving downwards at constant speed.
- ☐ Moving upwards and gaining speed.
- ☐ Moving downwards and gaining speed.
- ☐ Moving upwards and slowing down.
- ☐ Moving downwards and slowing down.

6. Put all forces on the FBD and determine the net forces for this situation:

This invention is designed to make it easier to push a load. The propeller provides 100 N of lift for the box that weighs 600 N. The person pushes with a force of 120 N. The coefficient of friction for the box is 0.2.





x-direction Fnet

y-direction Fnet

☐ box is gaining speed.
☐ box is at constant speed.
☐ box is losing speed.

☐ box is gaining speed.
☐ box is at constant speed.
☐ box is losing speed.