

## Newton's Laws Auxilliary Items

### For Galileo for a Day Lab

#### Post-Lab Questions:

A portion of Newton's first law of motion is "... an object in motion will stay in motion at the same speed and in the same direction unless acted upon by an *unbalanced force*." The idea is that **forces, when unbalanced, cause acceleration**. The diagrams below represent force diagrams. The various forces acting on a rightward moving cart are shown. The size of the arrow represents the strength or magnitude of the force.

Diagram A

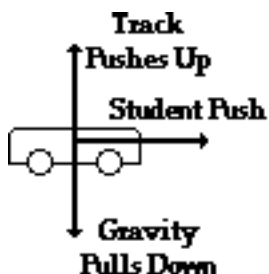


Diagram B

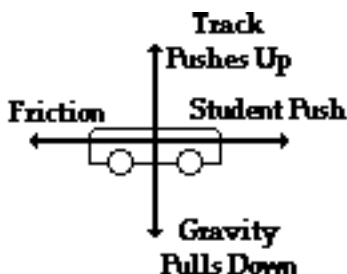


Diagram C

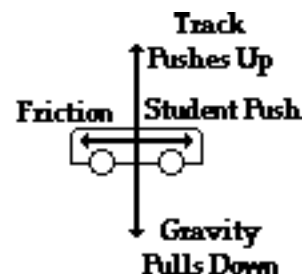


Diagram D

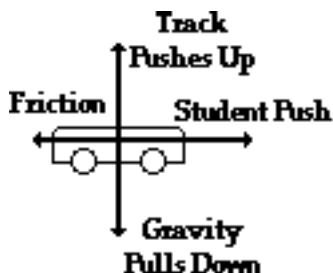


Diagram E

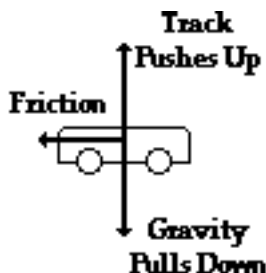


Diagram F

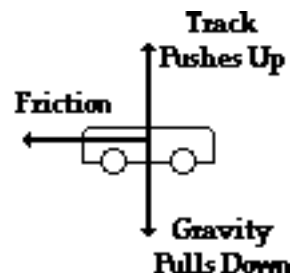


Diagram G

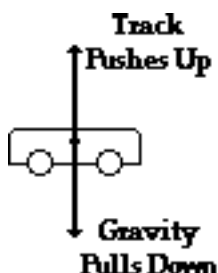


Diagram H

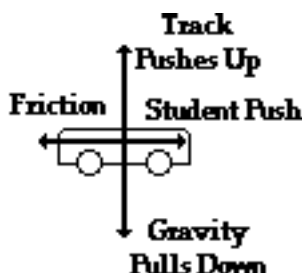
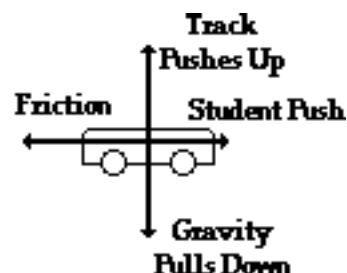


Diagram I



Which force diagram corresponds to the motion of the cart during the ...

... push-phase \_\_\_\_\_

... the no-push phase (maximum friction) \_\_\_\_\_

... the no-push phase (medium friction) \_\_\_\_\_

... the no-push phase (absolutely no friction) \_\_\_\_\_