Name:_____ Class:_____ Date:_____

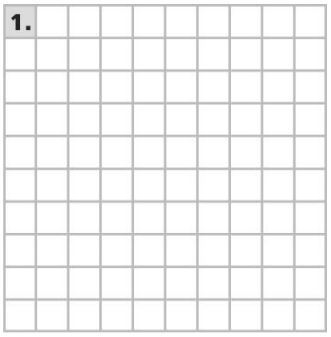
Forces and the Laws of Motion

Diagram Skills

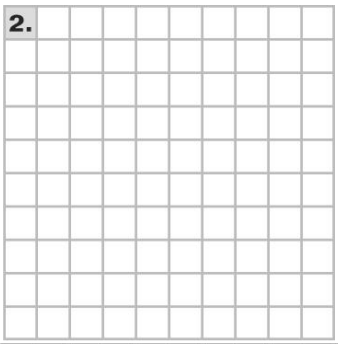
Changes in Motion

A large, square box of exercise equipment sits on a storeroom floor. A rope is tied around the box. Assume that if the box moves along the floor, there is a backward force that resists its motion.

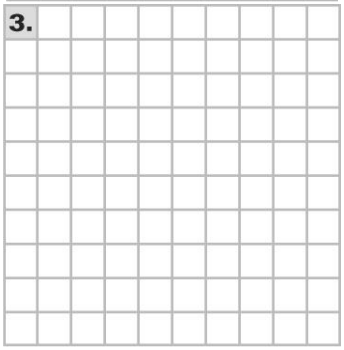
1. Suppose that the box remains at rest. In the space provided, draw a free-body diagram for the box. Label each force involved in the diagram.



2. Suppose a warehouse worker moves the box by pulling the rope to the right horizontal to the ground. In the space provided, draw a free-body diagram for the box. Label each force involved in the diagram.



3. Suppose the warehouse worker moves the box by pulling the rope to the right at a 50° angle to the ground. In the space provided, draw a free-body diagram for the box. Label each force involved in the diagram.



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