

Clicker questions for Forces and Motion Activity 1

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Learning Goals: Students will be able to

- Predict, qualitatively, how an external force will affect the speed and direction of an object's motion
- Explain the effects with the help of a free body diagram
- Explain the difference between static friction, kinetic friction and friction force. *This goal is not addressed in the student directions, but is part of the post-lesson.*



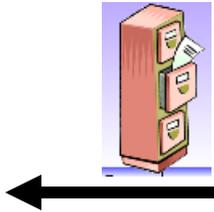
Crate was moving to
the right

Then, the guy
pushed the crate



1. If the **total force** acts in the same direction as the crate is sliding, the crate

- A. slows down
- B. speeds up
- C. remains at same speed
- D. slows down, changes direction and then speeds up going the other way
- E. remains at same speed, but changes direction

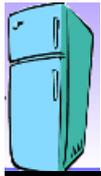


Cabinet was moving
to the left

Then, the guy
pushed the cabinet



2. If the **total force** acts in the opposite direction as the cabinet is sliding, the cabinet would
- A. slow down
 - B. speed up
 - C. remain at same speed
 - D. slow down, change direction and then speed up going the other way
 - E. remain at same speed, but change direction



Refrigerator was
moving to the right

Then, the guy pushed
the refrigerator



3. If there is **zero total force** acting on on the refrigerator, the refrigerator would
- A. slow down
 - B. speed up
 - C. remain at same speed
 - D. slow down, change direction and then speed up going the other way
 - E. remain at same speed, but change direction