

Lesson Check: Force and Acceleration

1) Forces that are equal in size but opposite in direction are called unbalanced forces.

- True
 False

2) If a net force acts on an object, the object may change speed, change direction or do neither.

- True
 False

3) Balanced forces acting on an object cause the object to accelerate. _____

- True
 False

4) According to Newton's second law of motion, a larger force acting on an object causes a greater _____ of that object.

5) When two forces act in the same direction on an object, the net force is found by _____ the forces.

6) Acceleration depends on which two factors?

- A)** mass and position
 B) net force and mass
 C) mass and velocity
 D) position and net force

Lesson Check: Force and Acceleration

7) Lizzie is pushing Alex on a scooter. Lizzie is pushing with 75 N of force to the left, and Alex is helping with 20 N to the left. What is the net force on the scooter?

- A) 95 N, to the right
- B) 95 N, to the left
- C) 55 N, to the right
- D) 55 N, to the left

8) Friction always acts in a direction _____ to the direction of motion.

Lesson Check: Force and Acceleration

9) Caleb is investigating the effect of friction on the motion of an object. He uses the following supplies for the investigation:

- a wooden block
- three ramps, each ramp is the same height and length but has a different surface (smooth wood, carpet, rough sandpaper)
- a stopwatch

Caleb tests his hypothesis that the smooth wood ramp surface causes less friction than the carpet and that the carpet causes less friction than the rough sandpaper.

a. Describe a procedure using these supplies that Caleb may follow to test his hypothesis.

b. Explain the **most likely** reason Caleb uses the same wooden block for each test.

Student Name: _____

Date: _____


Lesson Check: Force and Acceleration

c. Identify the independent and dependent variables for this investigation.

Student Name: _____

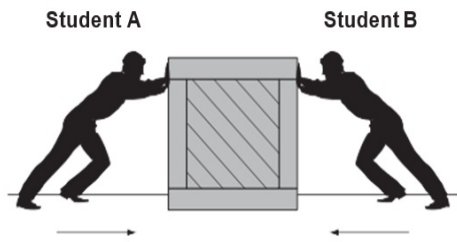
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Lesson Check: Force and Acceleration



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- 10)** Two students are investigating the effect of forces on the motion of an object. The two students each push on a box, as shown in the picture.



Even though the students are pushing the box very hard, the box does not move.

Describe one way the students could make the box move. Explain why this would move the box.

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Lesson Check: Force and Acceleration
