



Momentum

Directions: Read each statement carefully, then choose the best answer for that statements.

- B 1. The reason dashboards are padded is that padding will ...
- a) increase the force of an impact in a collision
 - b) increase the time of impact in a collision
 - c) decrease the momentum of a collision
- D 2. To increase the momentum of a golf ball, we could ...
- a) increase the force acting on it
 - b) increase the time of contact with the ball
 - c) follow through when hitting the ball
 - d) all the above
- D 3. Two gliders having the same mass and speeds move toward each other on an air track and stick together. After the collision the velocity of the gliders is ...
- a) twice the original velocity
 - b) the same as the original velocity
 - c) one half the original velocity
 - d) zero
- B 4. The momentum of an object is defined as the object's ...
- a) mass times its acceleration
 - b) mass times its velocity
 - c) force times its acceleration
 - d) none of the above
- B 5. Suppose a girl is standing on a pond where there is no friction between her feet and the ice; to get off the ice, she must...
- a) bend over touching the ice in front of her, then bring her feet to her hands
 - b) throw something in the direction opposite to that in which she wants to go
 - c) walk very slowly on tiptoe
 - d) get on her hands and knees and crawl off the ice
- B 6. A freight train rolls along a track with considerable momentum. If it were to roll at the same speed but had twice as much mass, its momentum would be ...
- a) zero
 - b) doubled
 - c) quadrupled
 - d) unchanged