

## Momentum Questions 101

- 1) In a game of billiards, the cue ball strikes the 8-ball and immediately comes to rest. What happens to the cue ball's momentum?
- 2) A bulldozer and a Mini Cooper are involved in a head-on collision. Which one experiences a greater force? Which one has a greater change in velocity?
- 3) An astronaut went out for a spacewalk and became stranded some distance away from her space station. All she has with her is her bag of tools. How can she get back to the space station? Explain your answer.
- 4) Objects on Mars weigh about 38% what they do on Earth. While driving on Earth, a mars rover moves at a speed of 1,500 mph. If the rover moves with the same speed on Mars, would it have more, less, or the same momentum as when on Earth?
- 5) Explain why it feels more forceful when you catch a baseball with your bare hand, as opposed to catching it with a baseball glove.