

Forces ▪ 10.4 Review and Reinforce

Newton's Third Law

Understanding Main Ideas

Answer the following questions in the spaces provided.

1. What does it mean to say that momentum is *conserved*?

2. How does the diagram at the right illustrate Newton's third law of motion? In your answer, compare the force of the foot kicking the soccer ball with the force of the soccer ball on the foot.



3. Could an elephant have the same momentum as a golf ball? Explain.

4. What is the momentum of a 20-kg dog running at a speed of 8 m/s?

5. Suppose you have two toy cars. Each has a mass of 0.04 kg. The cars have tape on their bumpers that will cause them to couple together. One car is stopped on the track. The other car, traveling at a velocity of 4 m/s, hits the first car. What is the momentum of the coupled cars?

Building Vocabulary

Answer the following questions in the spaces provided.

6. What is momentum?

7. Describe the law of conservation of momentum.
