

Newton's Third Law Worksheet - (Action-Reaction)

Name _____ Period _____ Date _____

Try to answer the questions below. Then, look on the answer sheet to see the correct response. Good luck!

- 1. A diver dives off of a raft - what happens to the diver? The raft? How does this relate to Newton's Third Law?**
- 2. A tennis racquet hits a tennis ball. Why doesn't the racquet swing backwards when the ball hits it? (Shouldn't it swing back because of action-reaction forces?)**
- 3. What action-reaction forces are involved when a rocket engine fires? Why doesn't a rocket need air to push on?**
- 4. What forces are acting on a book sitting on a table? Are action-reaction forces involved in this situation?**
- 5. If two people each standing on a scooter board push off of each other what happens (relate to Newton's Third Law)?**
- 6. In #5 how would the distance moved by the scooter boards compare if one person had a lot more mass than the other person?**
- 7. If a person standing on a scooter board pushes off of a wall, what happens? Can this situation be explained in terms of Newton's Third Law (action-reaction)?**
- 8. How is shooting a shotgun related to Newton's Third Law?**
- 9. Why does a rifle have less "kick" than a shotgun?**