

1. Newton's 3rd Law is known as the Law of _____. Whenever one body exerts a _____ on the second body, the second body exerts an _____ force in the _____ direction.

2. In every interaction, forces occur in _____. For example, when you walk across the floor, you push the floor (forward, backward) and the _____ pushes you (forward, backward). The action/reaction forces do not cancel out because _____ objects are involved, each experiencing a _____, _____ force.

3. When a kicker kicks a football with a force of 100 N, the ball _____. The effects are different because the kicker has more _____ and therefore accelerates (more, less).

4. If you are weighing yourself while standing next to the bathroom sink, and you pull upward on the sink, your weight will appear to be (more, less) because the sink _____ on you.

5. For the following action forces, give the reaction forces:
 - a. Hammer hits nail. _____
 - b. Earth pulls down on falling leaf. _____
 - c. Falling leaf pushes air down. _____
 - d. Man pushes elephant forward with a force of 500 N. _____

6. Look at the diagram on the right. The earth pulls down on the girl and the ropes pull up on her with equal force. The net external force on the girl is _____. Why is this not an example of an action/reaction pair?



State the two action/reaction pairs of force involving the girl:
