

Concept Review

Section: Motion and Force

1. **Identify** the following examples of friction as unwanted or necessary.

_____ a. friction between a cast-iron pan and the food in the pan

_____ b. friction between bones in a joint

_____ c. friction between tires and the road

_____ d. friction inside a car engine

2. **Suggest** why placing wheels under a heavy box reduces the necessary force required to push it along at a constant speed.

3. **Identify** the four fundamental forces in nature.

4. **Explain** what happens whenever a net force acts on an object.

5. **Analyze** the following situations, and indicate whether the forces are balanced or unbalanced.

_____ a. a skydiver accelerating downward

_____ b. a cannonball fired parallel to the ground

_____ c. a motorboat coasting at a constant speed

_____ d. a bike leaning against a tree