

Name: _____ Date: _____ Class: _____

Body Motion Pre/Post-Quiz **Answer Key**

1. Which direction would your velocity point when you're at the peak of a horizontal leap? Sketch a diagram to illustrate your thinking.

Sideways/horizontally for velocity, downward for acceleration.

2. In what direction would your hand be accelerating if you swung it in a circle in front of you? Sketch a diagram to illustrate your thinking.

Towards the elbow, or center of rotation.

3. If you stand 3 meters to the right and 4 meters ahead of the origin, what is the size of the position vector that points directly to you? Draw a top-down diagram to illustrate.

5 meters.

4. Imagine you were to stand on tiptoe and spin in a circle (do a pirouette). What would the velocity of your head look like? What would the velocity of your elbow look like? Sketch a diagram to illustrate.

Head should be zero; elbow should be some speed tangential to the spin of the pirouette.