

Name: _____ Section: _____

Using a Frame of Reference to Describe Motion

Directions: Motion is a change in position relative to a frame of reference or reference point. Use your understanding of a frame of reference to answer the following questions.

1. Baseball Game

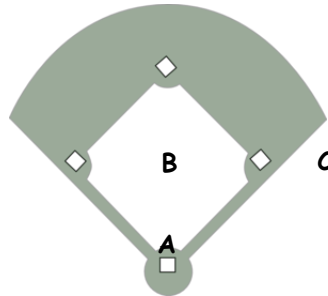


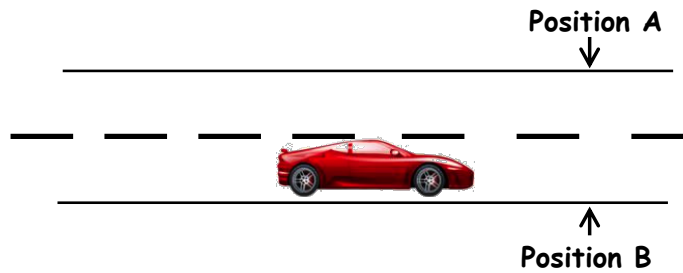
Image taken from: <http://www.clker.com/>

- A. Imagine you are the batter at the plate and describe what you see as the ball leaves your bat towards straight-away center, shortly after it is thrown toward the plate. Your body is the frame of reference.

- B. Imagine you are the pitcher on the opposing team and describe the same scene, using your body as the frame of reference.

- C. Imagine you are a fan sitting in the section directly to the right of first base and describe the same scene, using your body as the frame of reference.

2. Sidewalk



- A. Imagine you are a pedestrian waiting on the sidewalk to be picked up (Position A) and you notice a sports car speed down the street. In detail, describe the motion of the car as it passes you.

- B. Imagine you are a pedestrian on the opposite side of the street (Position B). In detail, describe the motion of the car as it passes you.

- C. What frame of reference is used to help describe what you see from Positions A and B? Explain your reasoning.

3. Create your own scenario, with visual, and describe what you see based on a particular frame of reference.