

Motion Notes and Practice

Motion is a change in an object's position and/or direction over time.

Give some examples:

Interestingly....motion is not always described the same way for a particular object.

Relative motion is the idea that the motion of an object is described by comparing how it changes its position over time relative to (or compared to) another object

Are you moving in your chair right now?

Is the Earth spinning and revolving around the Sun?

So are you moving?.....

Compared to your chair, you aren't moving.

Compared to the Sun, you are.

That's relative motion. Your motion is described differently based on which reference point you are compared to.

What's a reference point?

A **reference point** is an object we use to compare an object's motion to. The motion of an object will be described differently depending on what the reference point is doing and where it is located.



Glue this side into your notebook





Describe the motion of the car on the left if you were standing on the left side of the road watching it drive.

Describe the motion of the same car (on the left) if you were in the car on the right driving faster.



Describe the motion of the three objects/people relative to a reference point and circle the reference point in your answer. Circle the motion in the image, too.

ex. The man is skiing toward the reindeer.

- 1.
- 2.
- 3.

If you were person C...

person A is moving _____

person B is moving _____

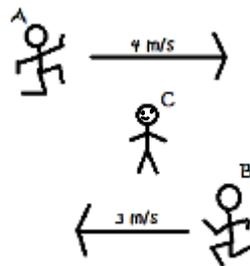
and person C, themselves, is _____.

To you observing where you are looking at your paper....

person A is moving _____

person B is moving _____

and person C is _____.



This train is moving at a constant speed.

If there are no windows in the train, Girl A on the train would describe her motion as _____.

Girl B on the ground would describe the motion of Girl A as _____.

If the train was going a constant speed and the girl inside jumped up, where would she land?