**Motion Maps**

A motion map represents the position, velocity, and acceleration of an object at various clock readings. (At this stage of the class, you will be representing position and velocity on a motion map). Suppose that you took a stroboscopic picture of a car moving to the right at constant velocity where each image revealed the position of the car at one-second intervals.

1. 

Draw the motion map to represent the cars above.



1. If the car were traveling at greater velocity (2 m/s), the strobe photo might look like this:



Draw the motion map to represent the cars above.



1. If the car were moving to the left at constant velocity (2 m/s), the photo and motion map might look like

this:



Draw the motion map to represent the cars above.



1. Explain the motion of the car represented in this motion map.



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1. Draw the motion map to depict the movement of the car in the following scenario.

You drive to the end of a 8 meter driveway at a rate of 2 meters per second. You stop at the end of the drive way to look for traffic. Three seconds pass when you realize you forgot your phone. You back up the drive way at a rate of 1 meter per second and put your car in park before getting out.



**Motion Map Practice**

Complete a Motion Map for each of the scenarios. Make sure to set up your motion map correctly.

1. Jena walks 10 meters in 5 seconds to her vanity. She stands at the mirror and applies lip gloss for 4 seconds.

1. The car drives 10 meters in 5 seconds, then another 10 meters in 2 seconds.
2. A dog chases a ball 8 meters in 2 seconds and takes 3 seconds to pick it up. The dog returns the ball in 4 seconds.
3. Sammy rides his bike 15 meters in 5 seconds to his friend, Jake’s house. It takes him 5 seconds to find that Jake is not home. It takes Sammy 15 seconds to walk his bike back home.
4. Create your own. Write a short scenario of motion and draw the motion map to depict the movement.