

Roller Coaster Test

1. Pick a point on your roller coaster where 2 or more forces are acting on the marble.
 - a. Describe where that point is.

 - b. Identify the forces that are acting on the marble at that point, and explain what the overall effect is (what happens to the marble).

2. Pick another point on your roller coaster where 2 or more forces are acting on the marble.
 - a. Describe where that point is.

 - b. Identify the forces that are acting on the marble at that point, and explain what the overall effect is (what happens to the marble).

3. Location of Negative Acceleration and Location of Positive Acceleration
 - **Describe** an area of negative acceleration on your roller coaster and **explain** why it takes place there.
 - **Describe** an area of positive acceleration on your roller coaster and **explain** why it takes place there.

4. Location of Change in Velocity Due to Change in Direction.

Describe an area of the roller coaster where velocity changes due to change in direction and **explain** why it happens.

5. Calculating Average Speed

Write the formula for average speed. Use your data to calculate the average speed of your roller coaster. Be sure to write the correct units.

6. Location of Highest and Lowest Speed

Describe a place on your roller coaster where the speed will be the highest and **calculate** the top speed.

Describe a place on your roller coaster where the speed will be the lowest and **calculate** the lowest speed.