

# (SI) Velocity and Acceleration

## Investigate

Part A: Sketch of the Roller Coaster

1a.

2a.

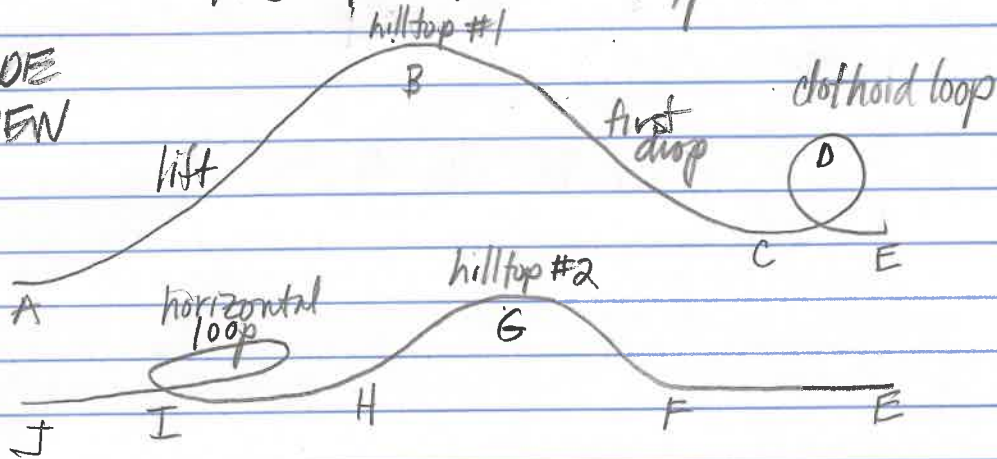
3.

3a.

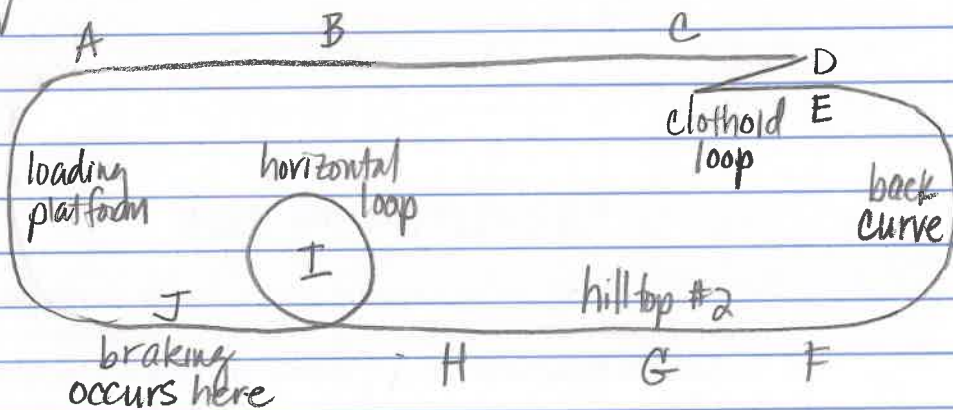
# The Terminator Express

4a.

SIDE VIEW



TOP VIEW



## Part B: Roller-Coaster Fun

1a.

3a. left

right

straight  
ahead

4a.

5a.

6a.

7a.

Vector - a quantity  
that has both  
magnitude (size/  
amount) and  
direction

7b.

### Part C: Measuring Velocities and Calculating Accelerations

1a.

2a.

3a.

4a. We are using a photogate. A photogate records the time during which the beam is interrupted.

5a.

7a. Speed of ball @ start =  $\emptyset$  m/s  
Speed of ball @ bottom =  
time from start to bottom =

7b.

### Part D: Acceleration on the Roller Coaster - Pulling g's

1a.

