

The Vortex

The Vortex is a looping, twisting steel stand-up roller coaster designed to give you a hair-raising ride at speeds of up to 20 m/s (45 mph). Without a proper chair to sit down on, this ride is bound to keep you on the edge of your seat!



Measurements & Observations

1. As you wait in line, measure how long it takes for each coach to complete a trip around the track. Do not include the loading/unloading time as part of this measurement. In order to achieve a good accuracy, average together at least five separate timings to find the mean ride time.

_____ Average time of ride: Individual data:

2. Using distance = rate \times time, and the fact that the ride is 585 m long (1960 ft or 0.364 mile) calculate the average speed of a coach as it makes one trip around the track.

_____ Average speed of ride

3. On the track layout below, use colored highlighters to indicate where the coaches are moving fastest and slowest. Also record your three speed estimates from the following exercise at the appropriate locations.



