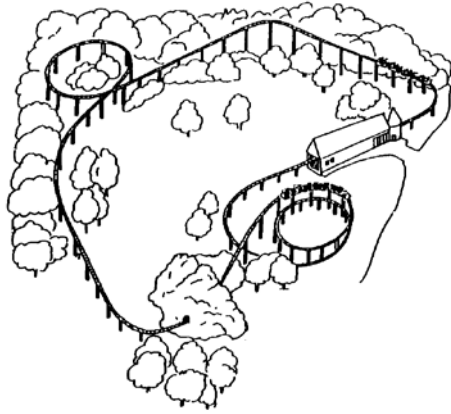


Trailblazer

1. Determine the speed v of the roller coaster as it moves around the final horizontal loop. (Hint: see Appendix B.)
Note: the train is 14.6 m long.



2. While riding the ride, use your vertical accelerometer to measure the centripetal acceleration a_c in the loop. If you are using a handheld non-electronic one, hold it perpendicular to the safety bar with the bottom of the tube pointing to the floor of the car. If you are using an electronic accelerometer, hold it so that “down” is considered to be toward the center of the circle.

3. Using the values from the two previous questions, determine the radius of the loop.