

## Distance versus displacement

In this activity, you will note the difference between a car's distance and displacement in four different scenarios.

Scenario 1: The car starts at the 5 meter position. The destination flag is at 55 meters. In this scenario, the distance travelled is 50 meters. The displacement is also 50 meters.

Scenario 2: The car starts at the 30 meter position. The destination flag is at 55 meters. The distance travelled is 25 meters. The displacement is also 25 meters.

Scenario 3: The car starts at the 30 meter position. The destination flag is at 6 meters. The car travelled minus 24km (displacement) towards the left. Notice the negative number; that means that the car travelled towards the west. The distance between the starting point and the destination flag is 24 km.

Scenario 4: The car starts at 30 meters. The destination flag is at 55 meters. The car travels to the destination flag and then back to the starting point at 30 meters. The distance travelled is 50 meters. However, the displacement is zero meters since the car ends up exactly where it started.