Measuring Distance

Kinematics

Distance

If I drive to Calgary, how can I figure out how far I went?

Distance

If I turn around and come back to St. Albert, how far have I gone?

What will the odometer in the car say?

Distance

If I drive around a circular track with a diameter of 1 km, how far have I travelled?

Distance

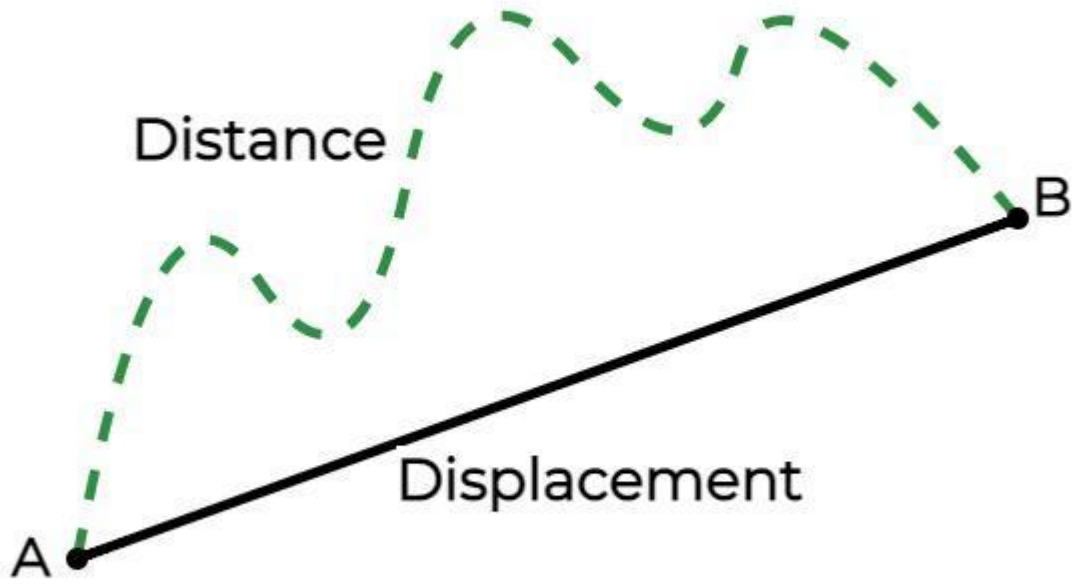
After completing a lap on the circular track, how far am I from where I started?

Distance vs. Displacement

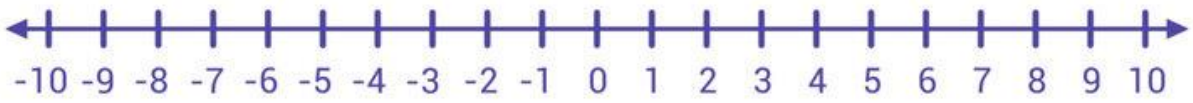
Distance

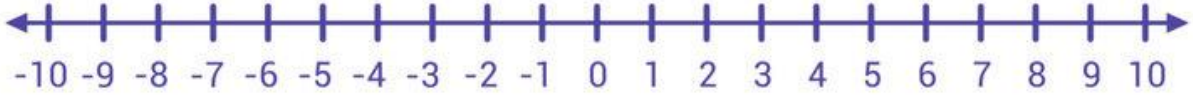
Displacement

Distance vs. Displacement

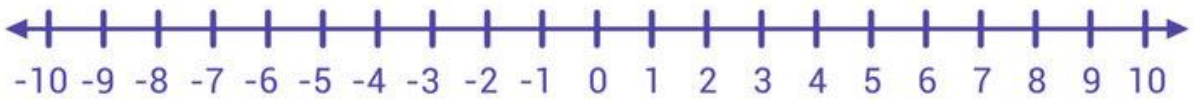


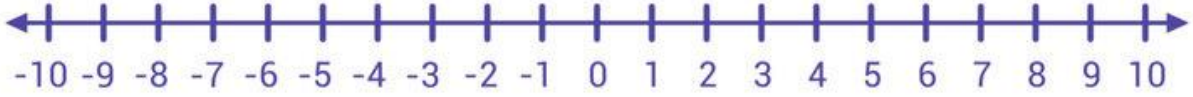
Distance vs. Displacement



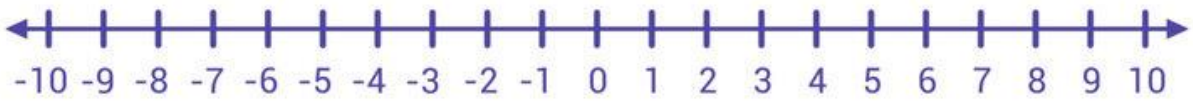


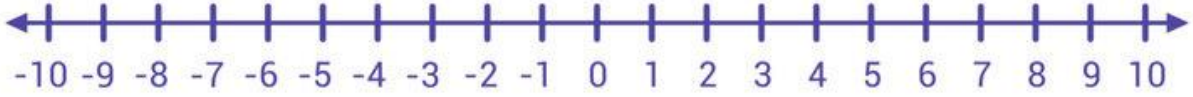
Distance vs. Displacement





Distance vs. Displacement





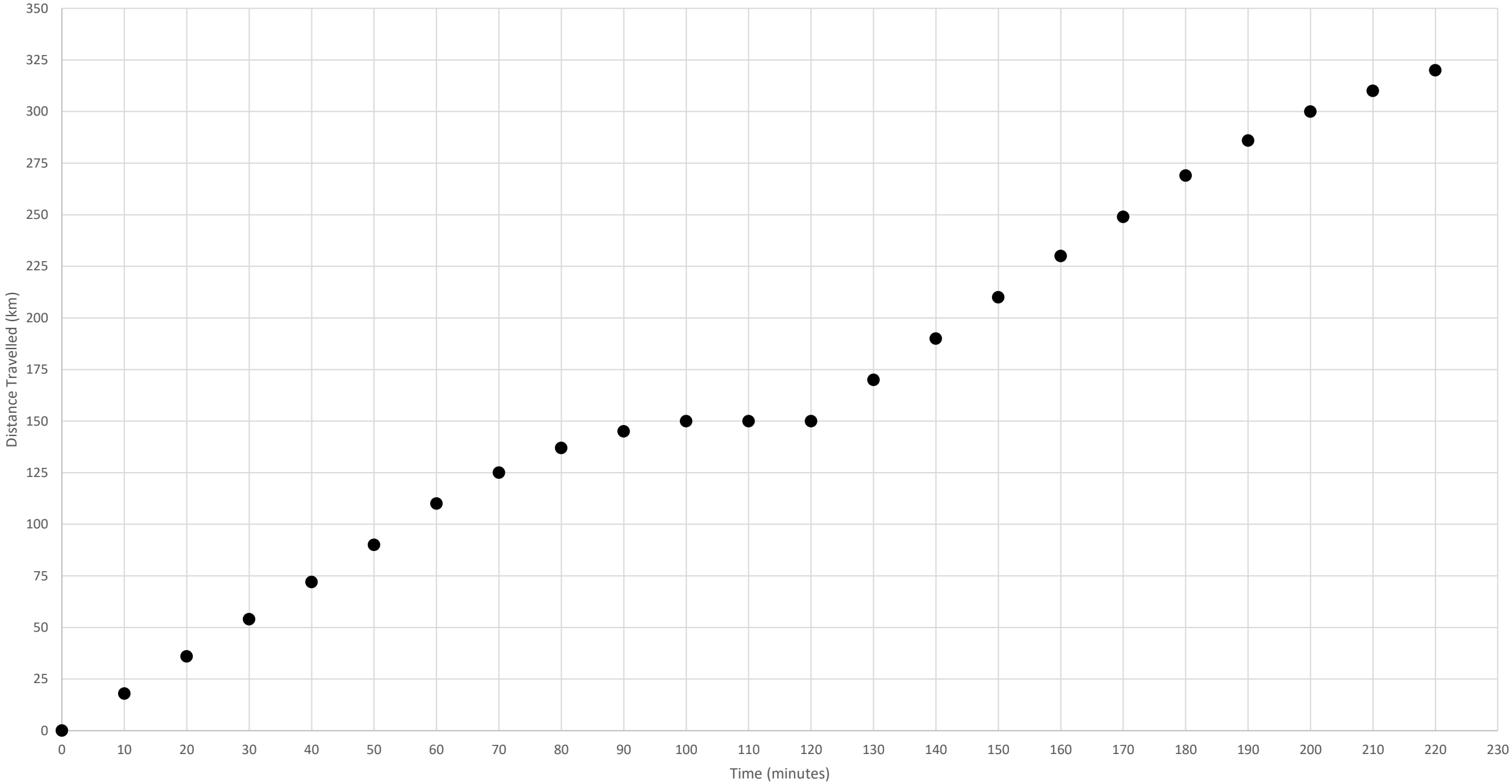
Distance vs. Displacement

Discussion: Can distance ever be negative?

Speed

Speed

How do I know how fast I went on my trip to Calgary?

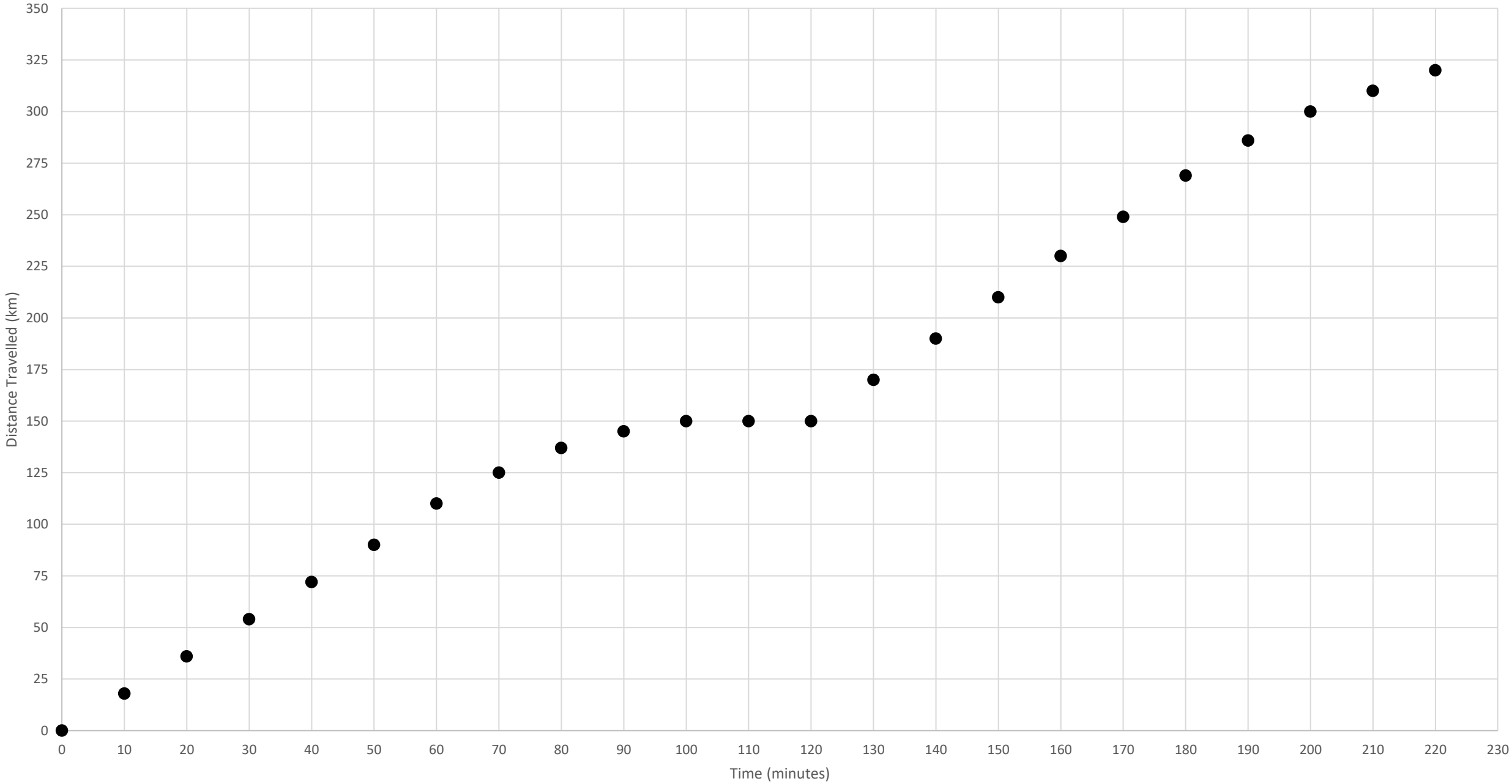

Distance travelled from Edmonton over time
Distance Travelled (km)
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
Time (minutes)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230

Speed

Can I find the speed in the first hour?

What about the second hour?

What was my average speed for the whole trip?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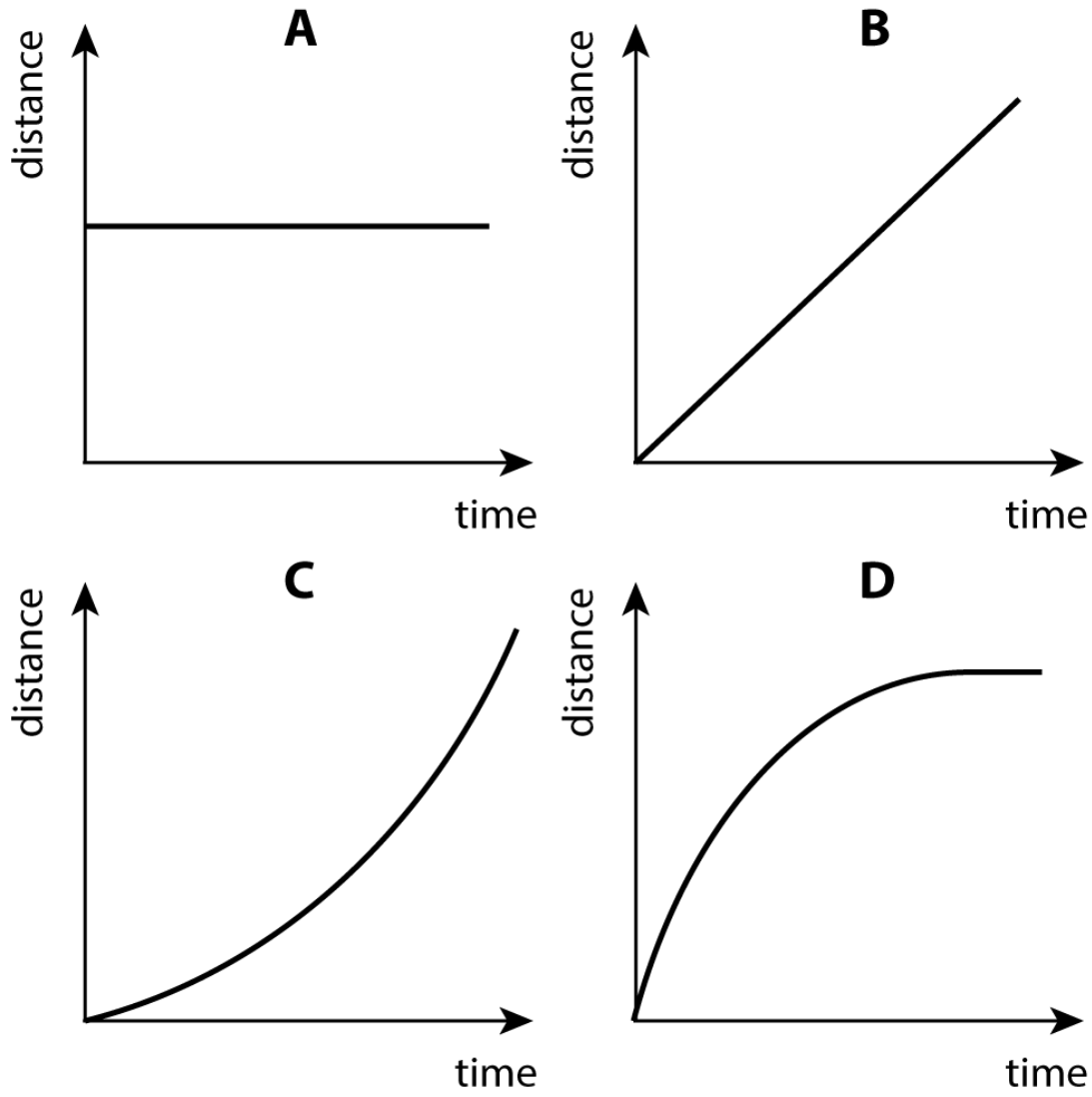
Graphing Distance



What type of motion does each graph show?

Is the object still, moving at a constant speed, getting faster, or getting slower?

Uniform Motion

Uniform Motion is:

In Science 10, we will deal with motion in straight lines, both uniform and accelerated. In Physics 20, you will see curved motion and changes in direction!