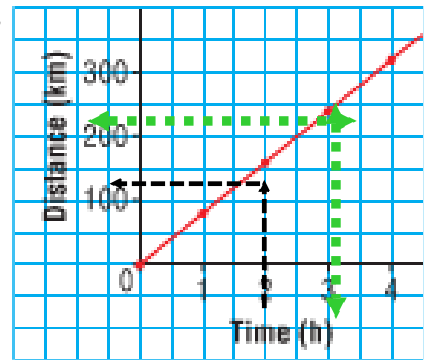


## Section 4.5 : Using Graphs to Estimate Values

The following graph shows the distance travelled by a car on the highway over a 4 hour period.

Graph of a Car Journey



\* We can make predictions about the data based on the pattern in the graph.

① Interpolation → Predictions based on two given points on the graph.

② Extrapolation → Predictions based on points outside the graph if the pattern continues

Questions:

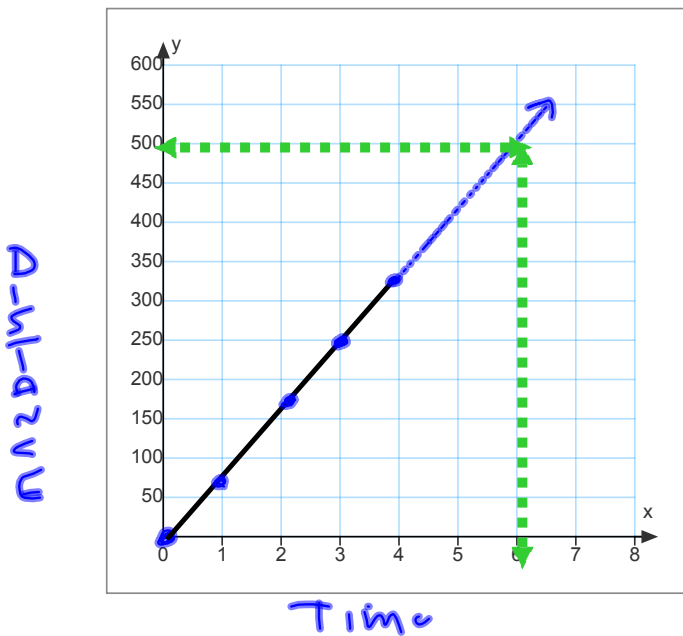
- ① Predict the distance traveled after  $2\frac{1}{2}$  hrs
- ② Find  $2\frac{1}{2}$  hrs on the horizontal axis, draw a dashed line up to the graph, draw a dashed line over to the vertical axis.

Ans)  $2\frac{1}{2}$  hrs is about 200 km

- ③ Predict how long it would take to travel 300 km.
- Start at 300 km on the vertical axis, draw a dashed line across to the graph, and then a dashed line down to horizontal axis.

Ans) 300 km is about 3 hrs, 45 min

NOTE: Make sure you have enough room on your grid to extend the graph to answer extrapolation questions.



Question:  
predict the distance travelled after 6 hrs.

Ans) About 500 km

→ Questions  
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 #4, 5, 8, 9, 12, 13 AB