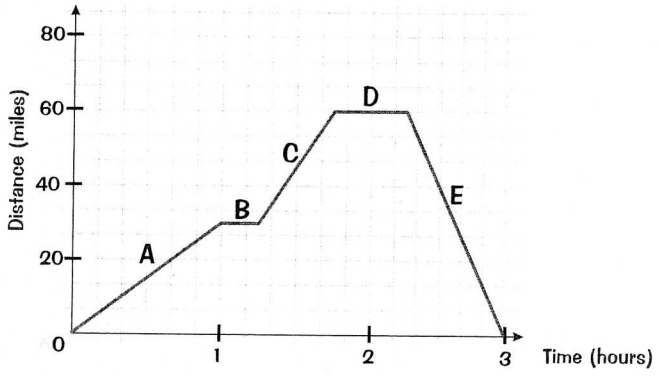
Travel and Conversion Graphs

Q1 The graph shows Nicola's car journey from her house to Alan's house and back, picking up Robbie on the way.



a) If Nicola started her trip at 10.00 am at what time did she return home? .....

b) How far is Robbie's house from Nicola's? .....

c) How long did they stop at Alan's for? .....

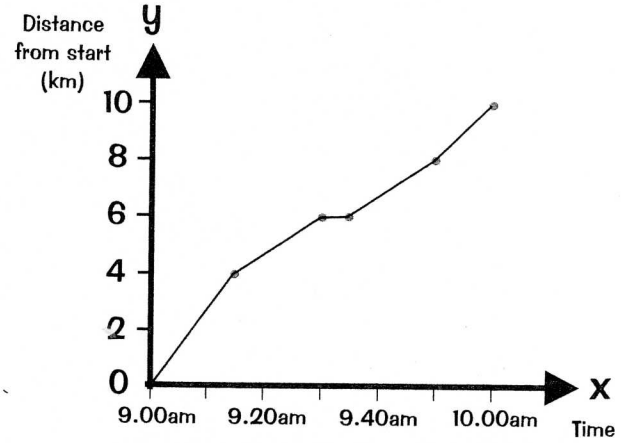
d) During which section was the speed greatest? .....

e) How long did the return journey take? .....

f) What was the speed of the car during section E? .....

You can work out where the houses are by looking for the flat parts of the graph — the bits where Nicola stops.

Q2 Marcus competes in a 10 km race. All the runners are given a small device to wear which records the time as they pass through certain checkpoints. Later, Marcus gets a graph of his performance during the race, shown below.



a) Between what times was Marcus running the fastest?

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b) Calculate his fastest speed in km/hr.

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c) What time did Marcus stop for a drink?

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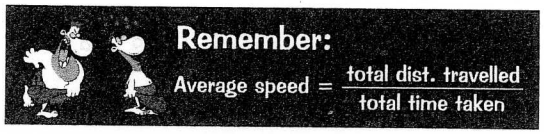
d) For how long did he stop?

.....

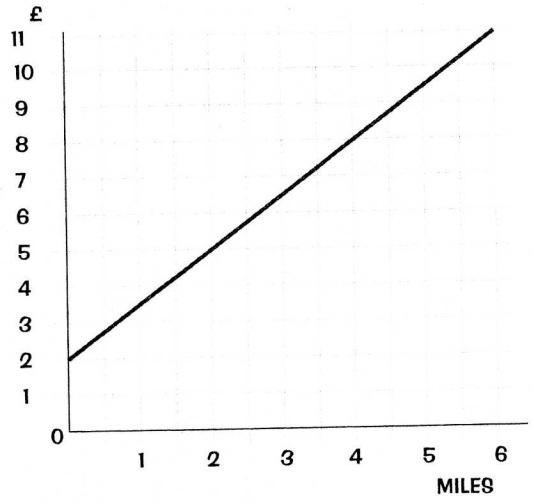
e) How long did it take Marcus to complete the 10 km run (in hours)? .....

f) What was the average speed for his entire run? .....



Travel and Conversion Graphs

Q3 This graph can be used to convert the distance (miles) travelled in a taxi to the fare payable (£). How much will the fare be if you travel:



a) 2 miles .....

b) 5 miles .....

c) 10 miles .....

d) Mike lives 4.5 miles away from his friend. Is £16 enough money for Mike to get a taxi to his friend's house and back?

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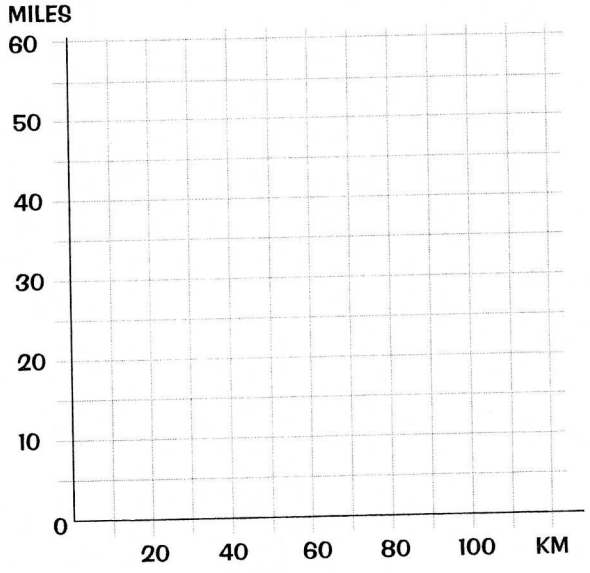
Q4 80 km is roughly equal to 50 miles. Use this information to draw a conversion graph on the grid. Use the graph to estimate the number of miles equal to:

a) 20 km .....

b) 70 km .....

c) 90 km .....

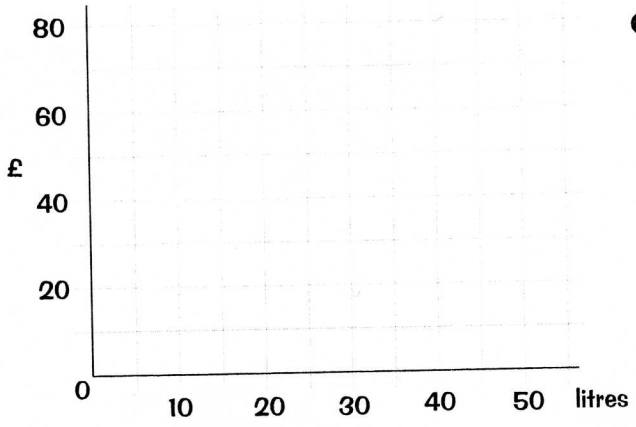


Q5 How many km are equal to:

a) 40 miles .....

b) 10 miles .....

c) 30 miles .....



Q6 Shelley fills up her car at a petrol station. Petrol costs her 150p per litre. Use this information to draw a conversion graph on the grid.

How much will it cost Shelley to fill her car up with 40 litres of petrol?

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