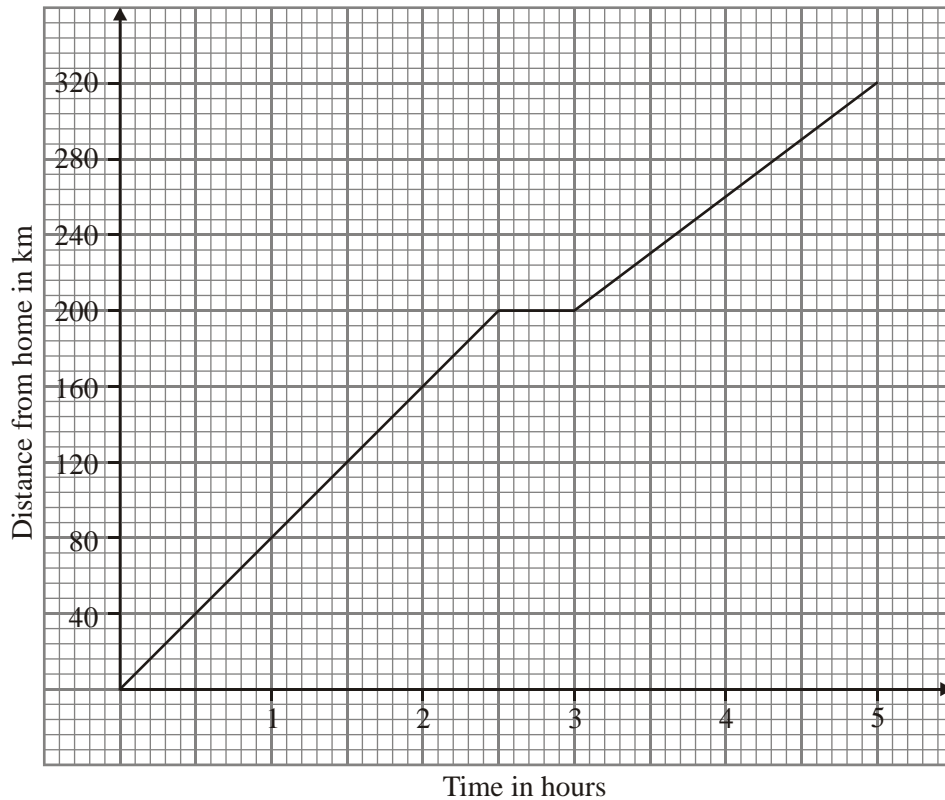


Graphs of Linear Equations

24 marks

1. Jane drove 320 km from her home to the airport.
The travel graph shows Jane's journey.



During the journey, Jane stopped for lunch.

- (a) (i) For how long did Jane stop for lunch?

.....

- (ii) How far had Jane travelled in the first 90 minutes?

..... km

(2)

- (b) Work out the steady speed that Jane travelled at after lunch.

..... km/h

(2)

Jane's car uses 1 gallon of petrol for each 40 miles.
A gallon of petrol costs £3.20

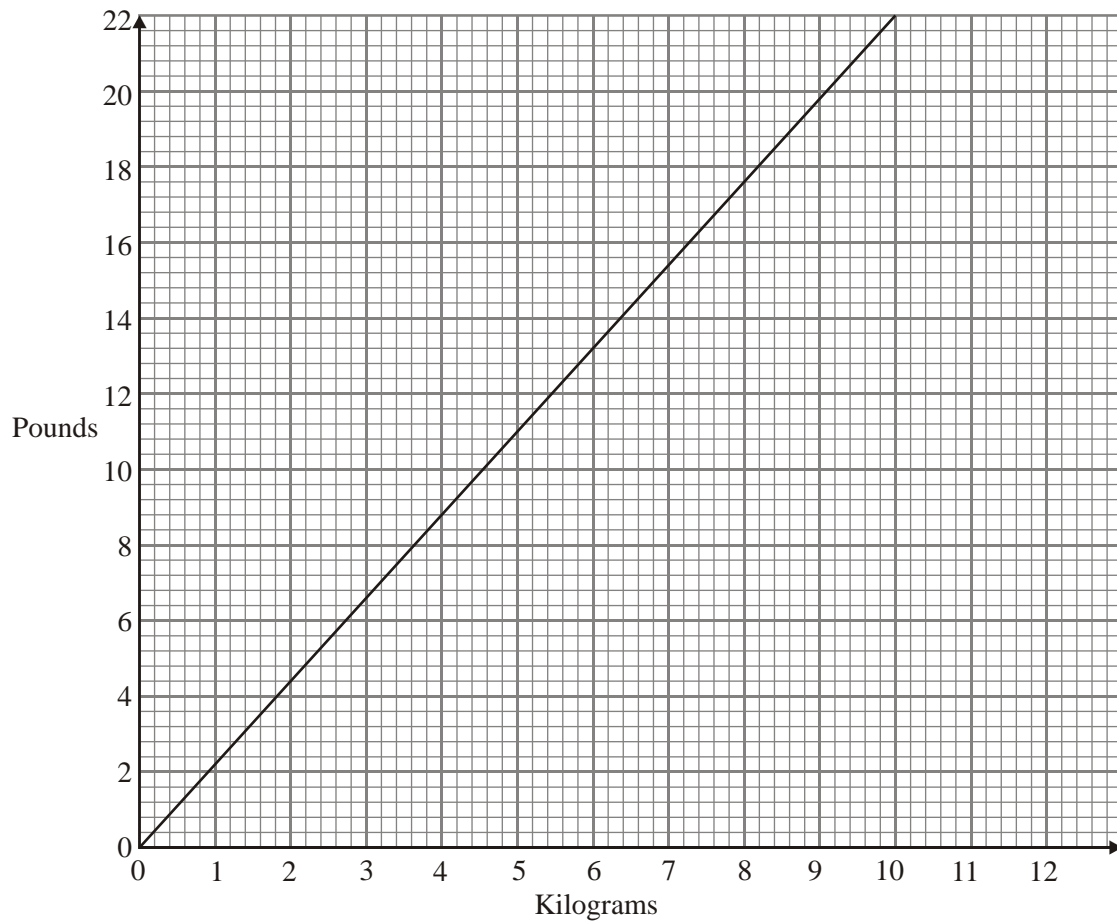
- (c) Work out the cost of petrol for Jane's 320 km journey.

£

(4)

(Total 8 marks)

2.



The conversion graph above can be used for changing between kilograms and pounds.

(a) Use the graph to change 22 pounds to kilograms.

..... kg

(1)

(b) Use the graph to change 2.5 kilograms to pounds.

..... pounds

(1)

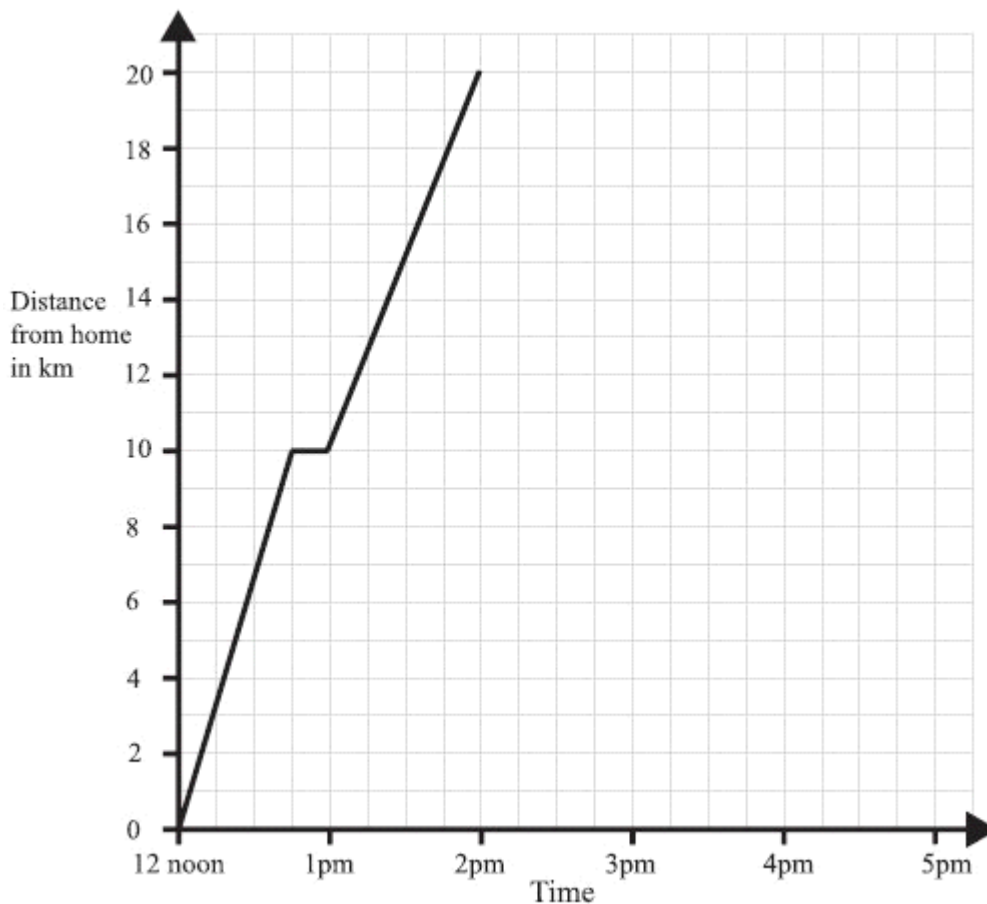
Firoza weighs 110 pounds.

(c) Change 110 pounds to kilograms.

..... kg

(3)

3. A man left home at 12 noon to go for a cycle ride.
The travel graph represents part of the man's journey.



At 12.45pm the man stopped for a rest.

- (a) For how many minutes did he rest?

.....minutes

(1)

- (b) Find his distance from home at 1.30pm.

.....km

(1)

The man stopped for another rest at 2pm.

He rested for one hour.

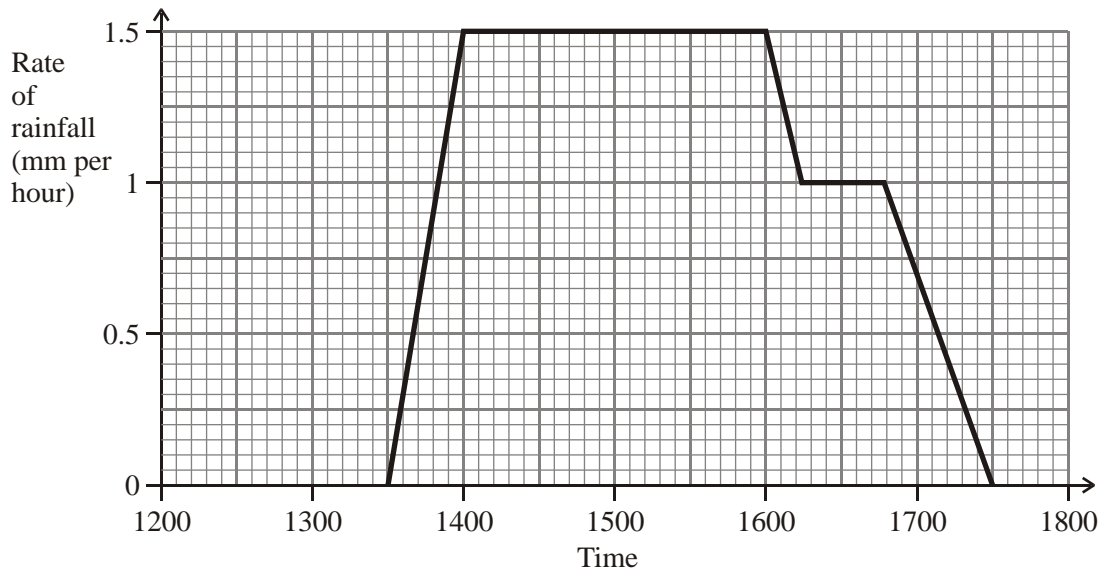
Then he cycled home at a steady speed. It took him 2 hours.

- (c) Complete the travel graph.

(2)

(Total 4 marks)

4. The graph shows the rate of rainfall, in mm per hour, one afternoon last year.



- (a) At what time did it start to rain?

.....

(1)

- (b) What was the rate of rainfall at 1700?

..... mm per hour

(1)

- (c) What happened to the rate of rainfall between 1600 and 1615?

.....

(1)

(Total 3 marks)

5. P , Q and R are three stations on a railway line.



$PQ = 26$ miles.

$QR = 4$ miles.

A passenger train leaves P at 12 00. It arrives at Q at 12 30.

Information about the journey from P to Q is shown on the travel graph opposite.

The passenger train stops at Q for 10 minutes.

It then returns to P at the same speed as on the journey from P to Q .

- (a) On the grid, complete the travel graph for this train.

(2)

A goods train leaves R at 12 00.
It arrives at P at 13 00.

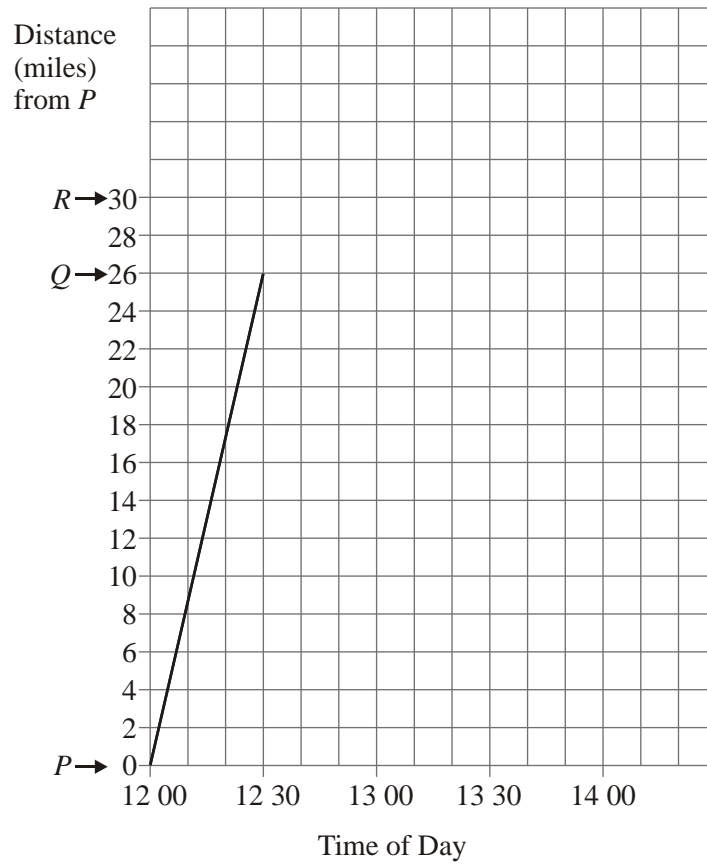
(b) On the grid, draw the travel graph for the goods train.

(1)

(c) Write down the distance from P where the goods train passes the passenger train.

..... miles

(1)



(Total 4 marks)