

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Pages	Mark
2 - 3	
4 - 5	
6 - 7	
8 - 9	
10 - 11	
12 - 13	
TOTAL	

In the style of



General Certificate of Secondary Education  
Foundation Tier

# Mathematics

# 43602F

Past Paper Type Questions by Topic

## Graphs

# F

<p><b>For this paper you must have:</b></p> <ul style="list-style-type: none"> <li>• a calculator</li> <li>• mathematical instruments.</li> </ul>	
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### Time allowed

- 1 hour

### Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book.

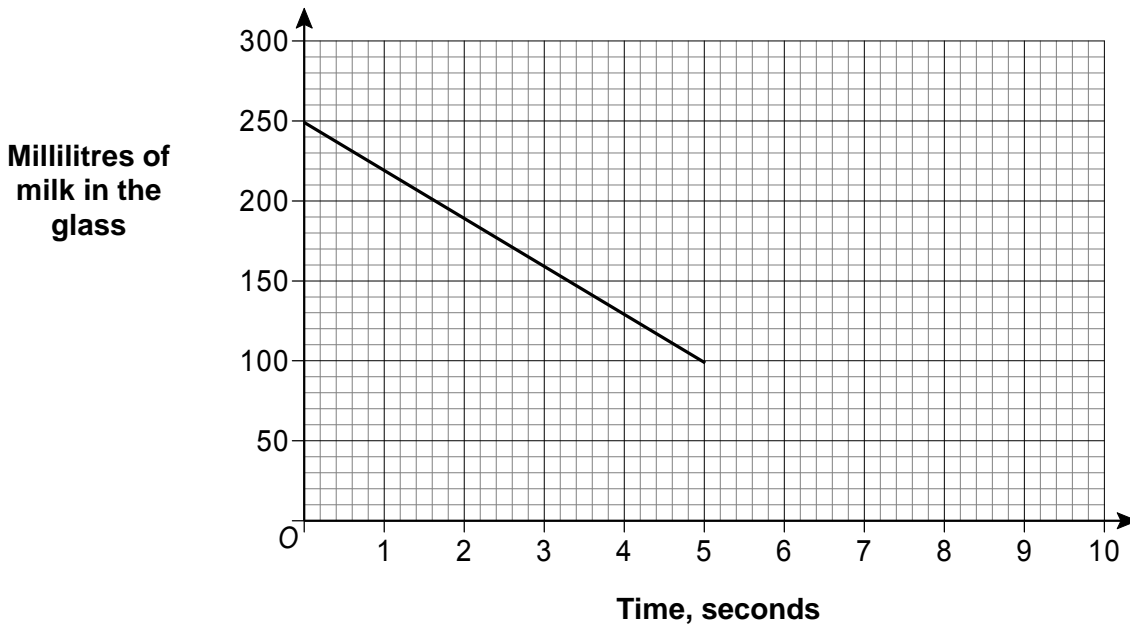
### Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is.
- The quality of your written communication is specifically assessed in some questions. These questions are indicated with an asterisk (\*)
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer booklet.

### Advice

- In all calculations, show clearly how you work out your answer.

- 1 Georgina has 250 millilitres of milk in a glass.  
She takes five seconds to drink some of the milk.  
The graph shows this information.



- 1 (a) How many millilitres of milk did Georgina drink in five seconds?

.....

Answer .....

(1 mark)

- 1 (b) Georgina does not drink any milk for the next two seconds.  
She then drinks all the remaining milk in three seconds.  
Show this information on the graph.

(2 marks)



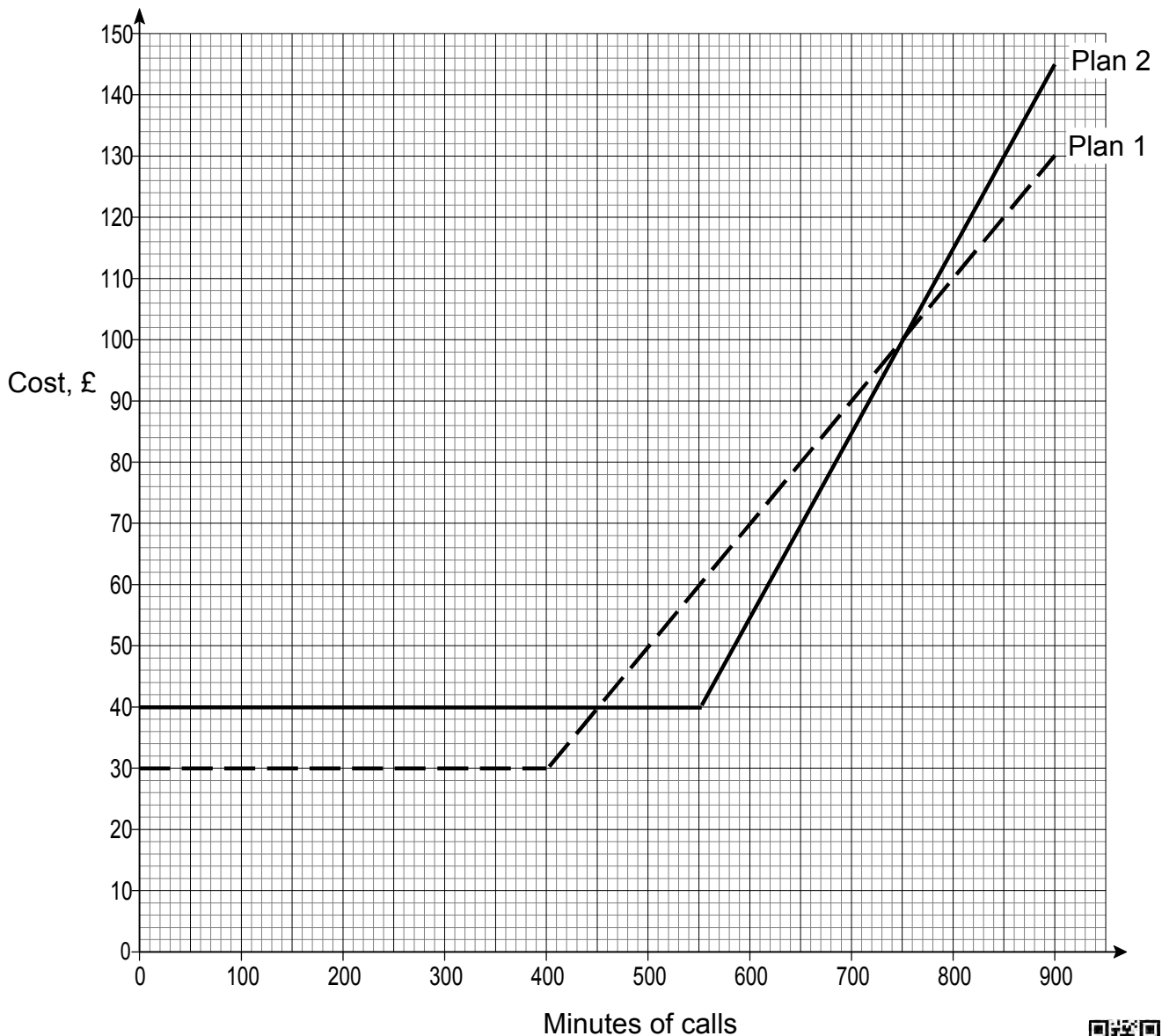
2

Here is a mobile phone tariff.

Plan 1	
Monthly charge	£30
Free minutes of calls per month	400
Extra minutes charged at	20 pence per minute

Plan 2 is a different mobile phone tariff.

These graphs show the cost, in £, for each of the plans.



**2 (a)** Complete the mobile phone tariff for Plan 2.

.....  
.....  
.....  
.....  
.....

<b>Plan 2</b>	
Monthly charge	£40
Free minutes of calls per month	
Extra minutes charged at	..... pence per minute

*(4 marks)*

**2 (b)** Louis is deciding whether to use Plan 1 or Plan 2.

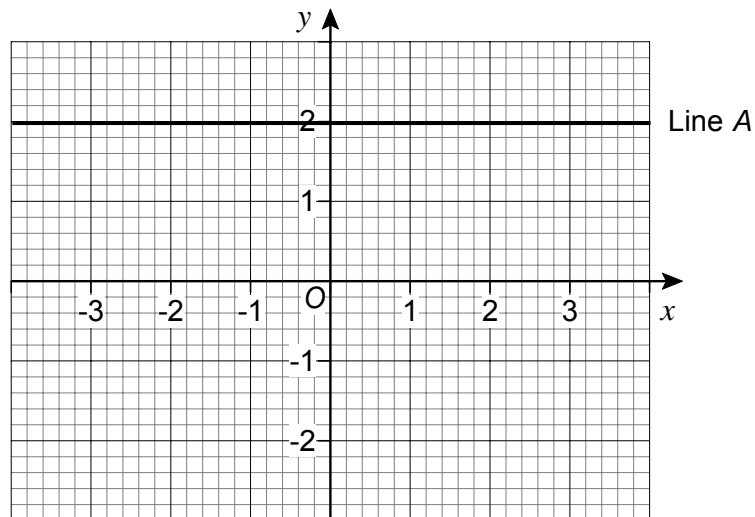
Work out the number of minutes of calls for which Plan 2 is cheaper.

.....  
.....

*(2 marks)*



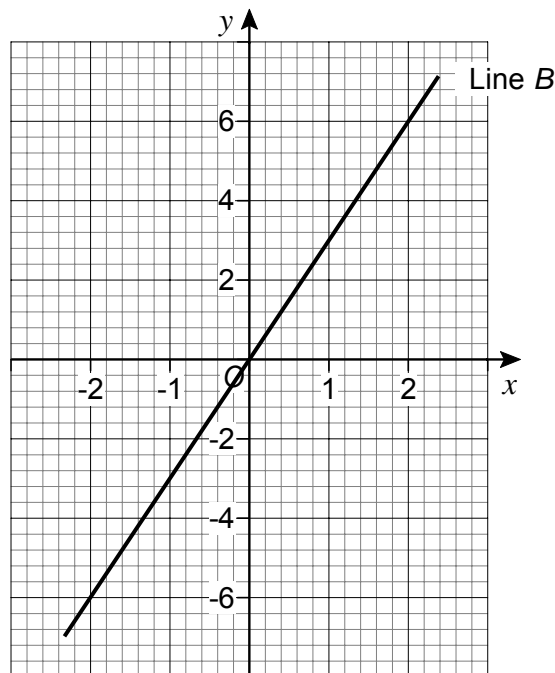
3 (a) Line A is drawn on the grid.



What is the equation of Line A?

Answer ..... (1 mark)

3 (b) Line B is drawn on the grid.

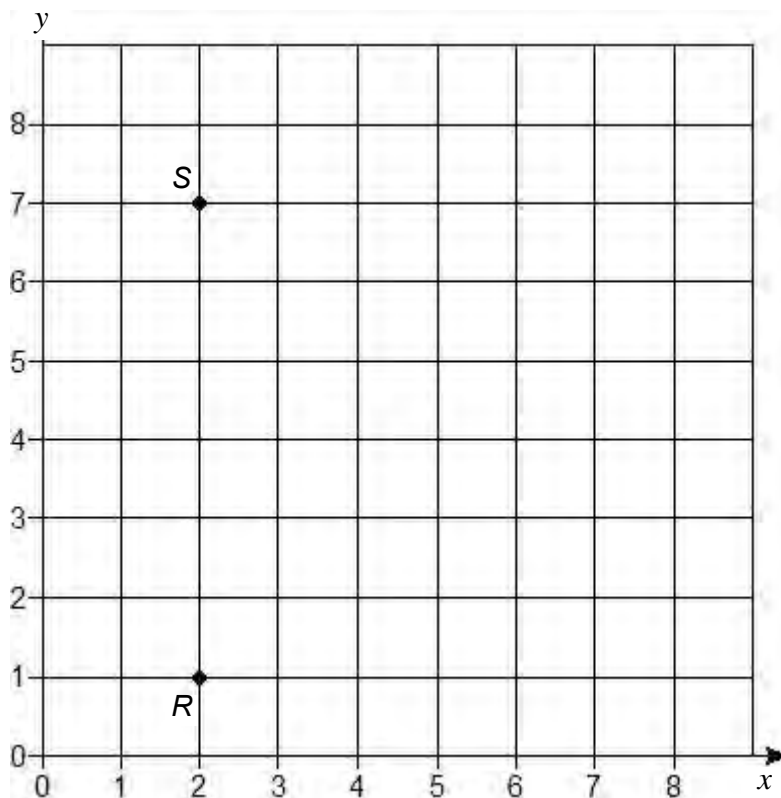


What is the gradient of Line B?

Answer .....(1 mark)



4 Points  $R$  and  $S$  are shown on the grid below.



4 (a) Write down the coordinates of  $R$ .

Answer (....., ..... ) (1 mark)

4 (b) Plot the point  $M(4, 2)$  on the grid.

(1 mark)

4 (c)  $M$  is the midpoint of the line segment  $RT$ .

4 (c) (i) Mark the position of  $T$  on the grid.

(1 mark)

4 (c) (ii) Write down the coordinates of  $T$ .

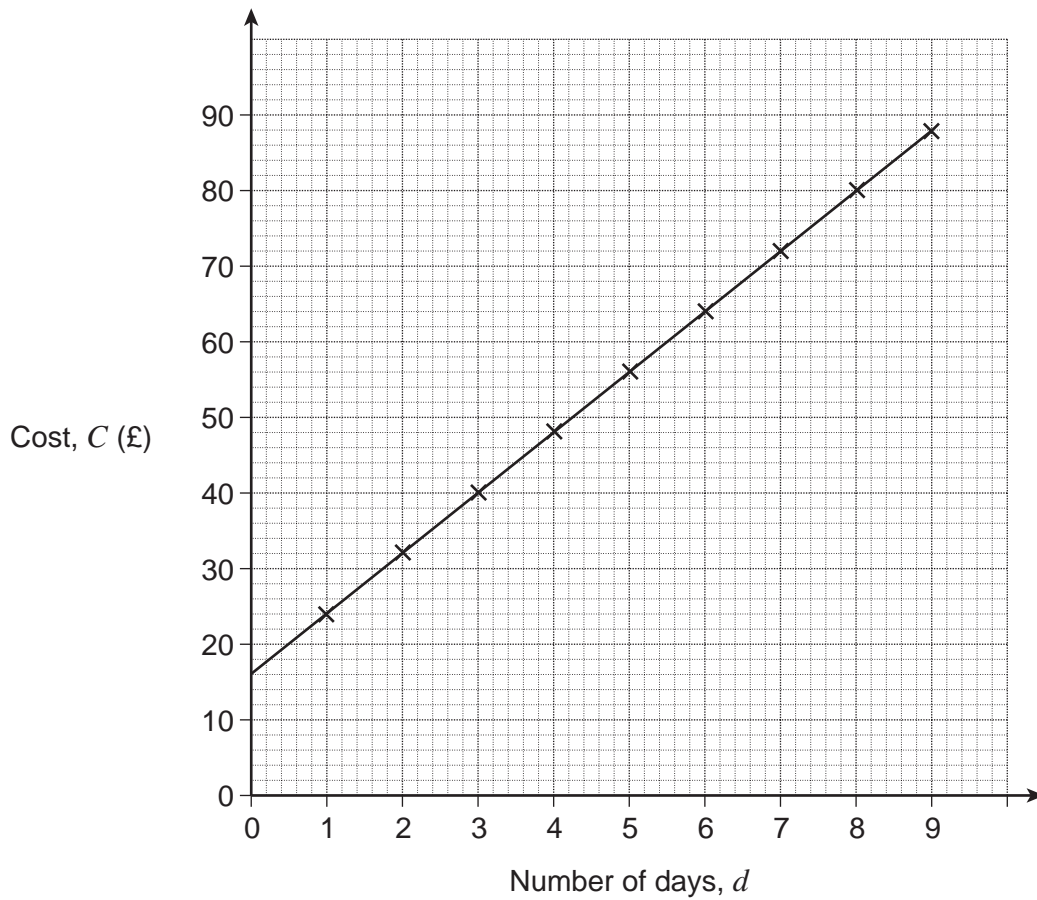
Answer (....., ..... ) (1 mark)

4 (d) The points  $R$ ,  $S$  and  $U$  are on a straight line. The point  $U$  is twice as far from  $R$  as point  $S$ . Write down the coordinates of  $U$ .

Answer (....., ..... ) (2 marks)



- 5 The graph shows the cost,  $C$  (£), of hiring a concrete mixer from Redwood Plant Hire for a number of days,  $d$ .



- 5 (a) Circle the correct formula for the cost,  $C$ .

$$C = 24d$$

$$C = 8d + 24$$

$$C = 16d + 8$$

$$C = 8d + 16$$

.....

.....

(1 mark)



5 (b) The cost of hiring a concrete mixer from Greens Plant Hire is given by the formula

$$C = 9d + 11$$

Helen thinks that Greens Plant Hire is always cheaper.

Is this true?

Tick a box.

Yes

No

Give reasons for your answer.

.....

.....

.....

.....

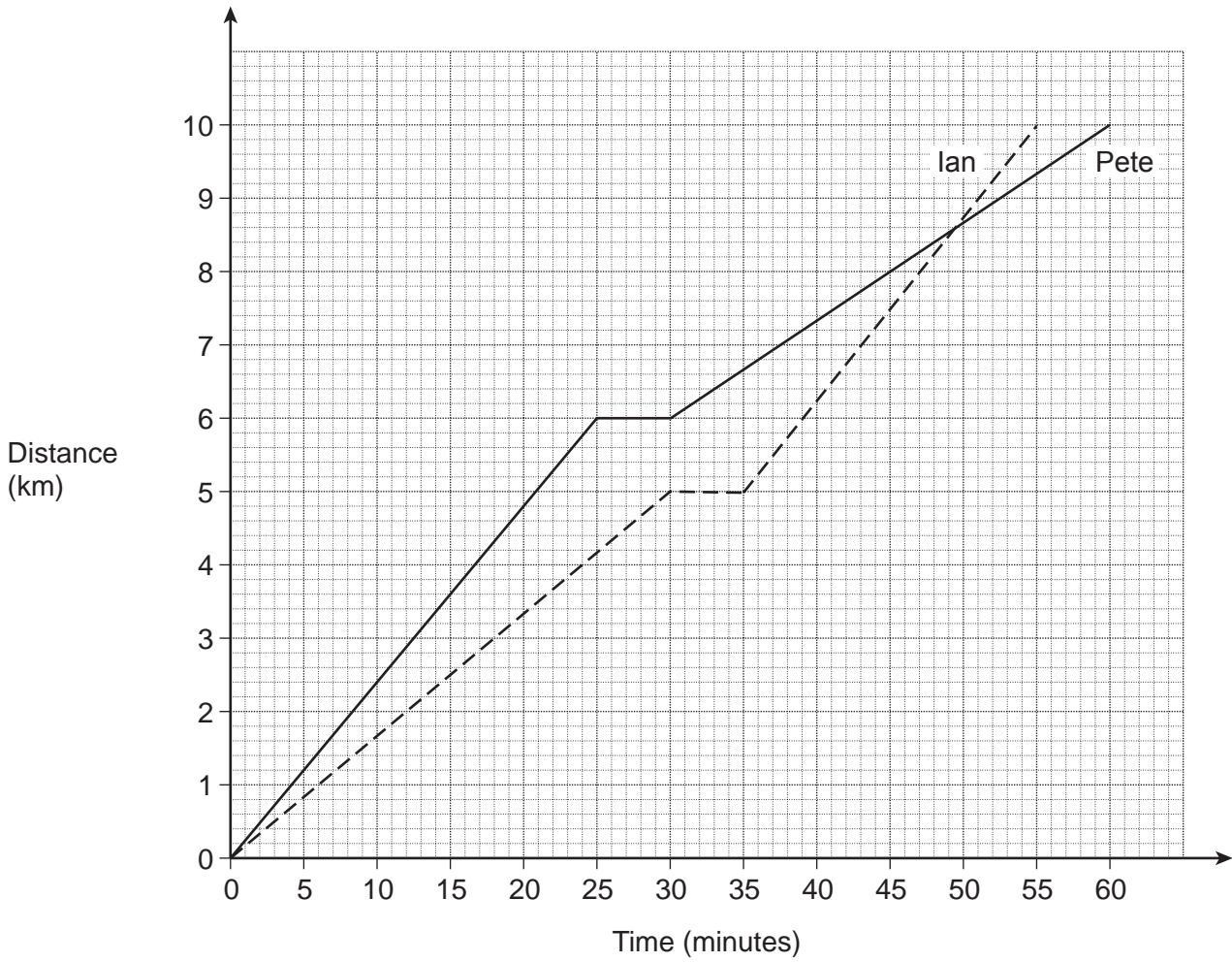
.....

(3 marks)





6 The graph shows two training runs by Ian and Pete.



6 (a) After how many minutes does Ian overtake Pete?

Answer ..... minutes (1 mark)

6 (b) How far ahead is Pete when Ian starts again after his rest?

.....  
 .....

Answer ..... km (2 marks)



**There are no questions printed on this page**

**DO NOT WRITE ON THIS PAGE  
ANSWER IN THE SPACES PROVIDED**

