

Pre Public Examination
GCSE Mathematics (Edexcel style)
March 2017
Foundation Tier
Paper 1F

Name

Class

TIME ALLOWED

1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- You are **NOT** permitted to use a calculator in this paper.
- Do all rough work in this book.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question on the Question Paper.
- **You are reminded of the need for clear presentation in your answers.**
- The total number of marks for this paper is **80**.

Question	Mark	Out of
1		1
2		2
3		1
4		2
5		2
6		3
7		5
8		6
9		3
10		6
11		5
12		4
13		2
14		4
15		2
16		3
17		5
18		5
19		6
20		6
21		4
22		3
Total		80

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

Question 1.

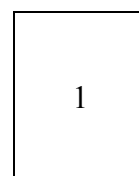
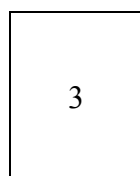
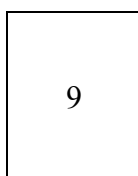
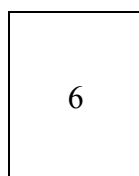
Write these numbers in order of size.
Start with the smallest number.

7 -5 2 4 -3

.....
(Total 1 mark)

Question 2.

Here are four cards.
There is a number on each card.



(a) Write down the largest 4-digit number that can be made using each card only once.

.....
(1)

(b) Write down the smallest 4-digit **even** number that can be made using each card only once.

.....
(1)

(Total 2 marks)

Question 3.

Write $\frac{4}{20}$ as a percentage

.....%

(Total 1 mark)

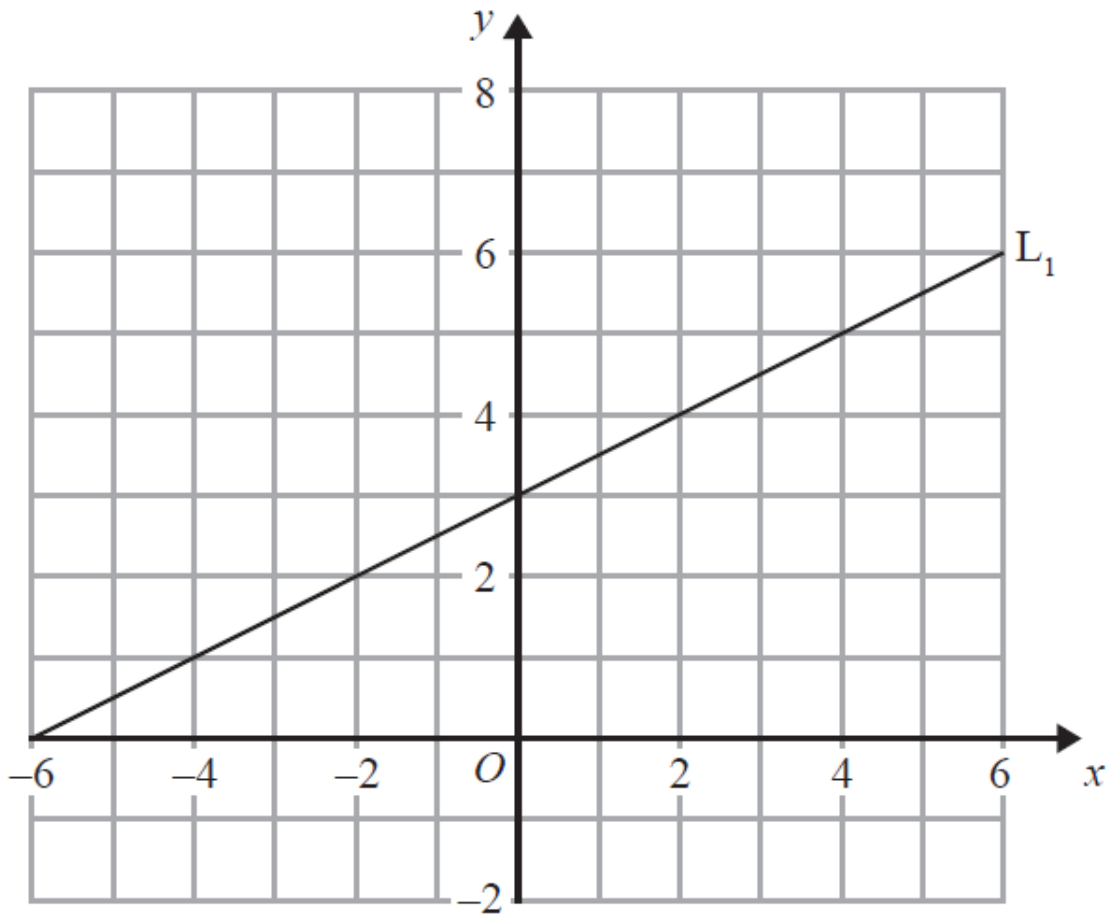
Question 4.

Work out 30% of £72.

£.....

(Total 2 marks)

Question 5.



(a) On the grid, mark with a cross (×) the point $(-2, 3)$.
Label the point C.

(1)

(b) Write down the coordinates of the midpoint of the line L_1 on the graph.

(.....,))

(1)

(Total 2 marks)

Question 6.

Buns	7p
Sausages	53p

Linda is organising a birthday party.

She has £25 to spend on buns and sausages.

She has to buy the same number of buns as sausages for the hotdogs.

What is the greatest number of sausages she can buy?

(Total 3 marks)

Question 7.

Here are the lengths of 16 films in minutes.

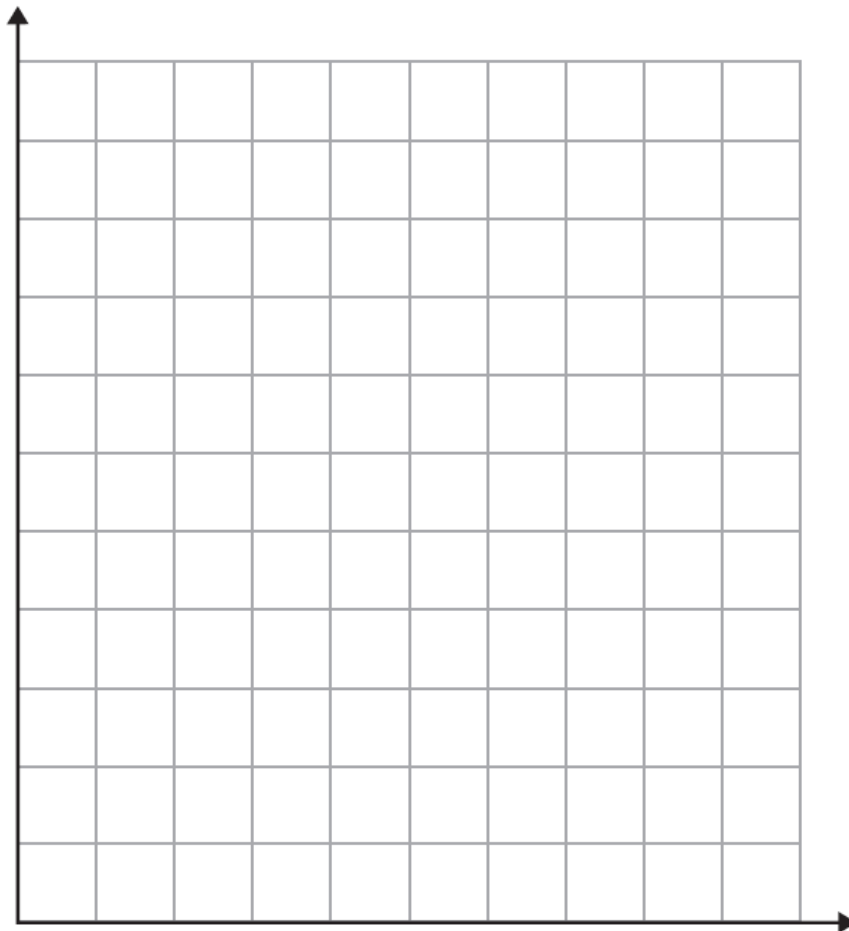
128 130 140 137 135 131 129 139
134 133 135 128 140 129 127 135

(a) Complete the table to show this information.

Length	Tally	Frequency
127–129		
130–132		
133–135		
136–138		
139–141		

(2)

(b) On the grid, draw a suitable diagram or chart for the information in the table.



(3)

(Total 5 marks)

Question 8.

There are 25 students in a class.
12 of the students are girls.

Here are the heights, in cm, of the 12 girls.

160 173 148 154 152 164 179 164 162 174 168 170

(a) Work out the median height of the girls.

.....
(1)

(b) What is the range of the girl's heights?

.....
(2)

There are 13 boys in the class.

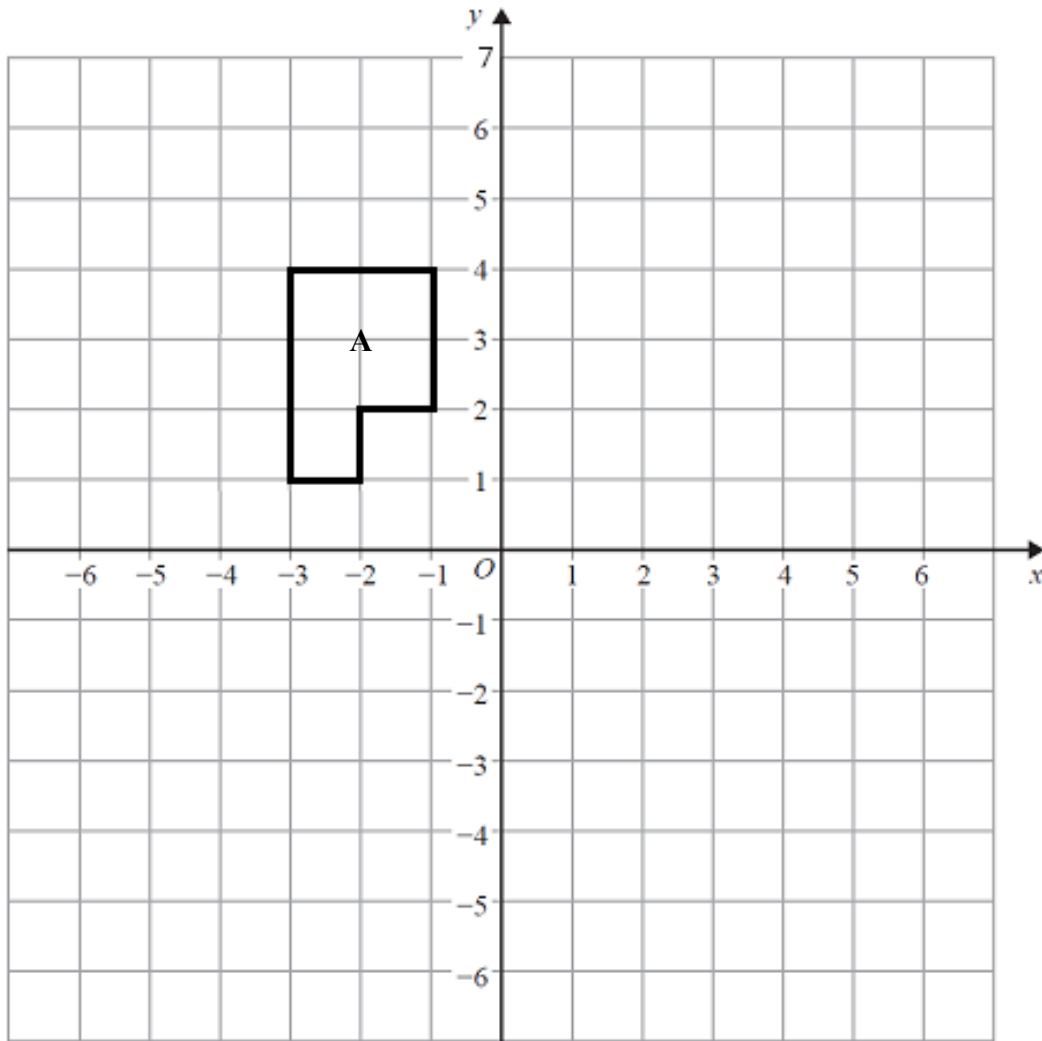
Here are the heights, in cm, of the 13 boys.

157 159 162 166 168 169 170 173 174 176 176 181 184

(c) Compare the heights of the boys with the heights of the girls.

(3)
(Total 6 marks)

Question 9.



- (a) On the grid, translate shape **A** by the vector $\begin{pmatrix} 6 \\ -5 \end{pmatrix}$

Label the new shape **B**.

(1)

- (b) On the grid, translate shape **B** by the vector $\begin{pmatrix} -8 \\ 8 \end{pmatrix}$

Label the new shape **C**.

(1)

- (c) Write down the column vector for the translation that maps shape **A** onto shape **C**.

$\begin{pmatrix} \\ \end{pmatrix}$

(1)

(Total 3 marks)

Question 10.

(a) Simplify $x + x + y + y + y$

.....
(1)

(b) Simplify $8p + 10q - 3p - 6q$

.....
(1)

(c) Expand $5(4m - 3)$

.....
(2)

(d) Solve $3f - 6 = 45$

$f =$
(2)

(Total 6 marks)

Question 11.

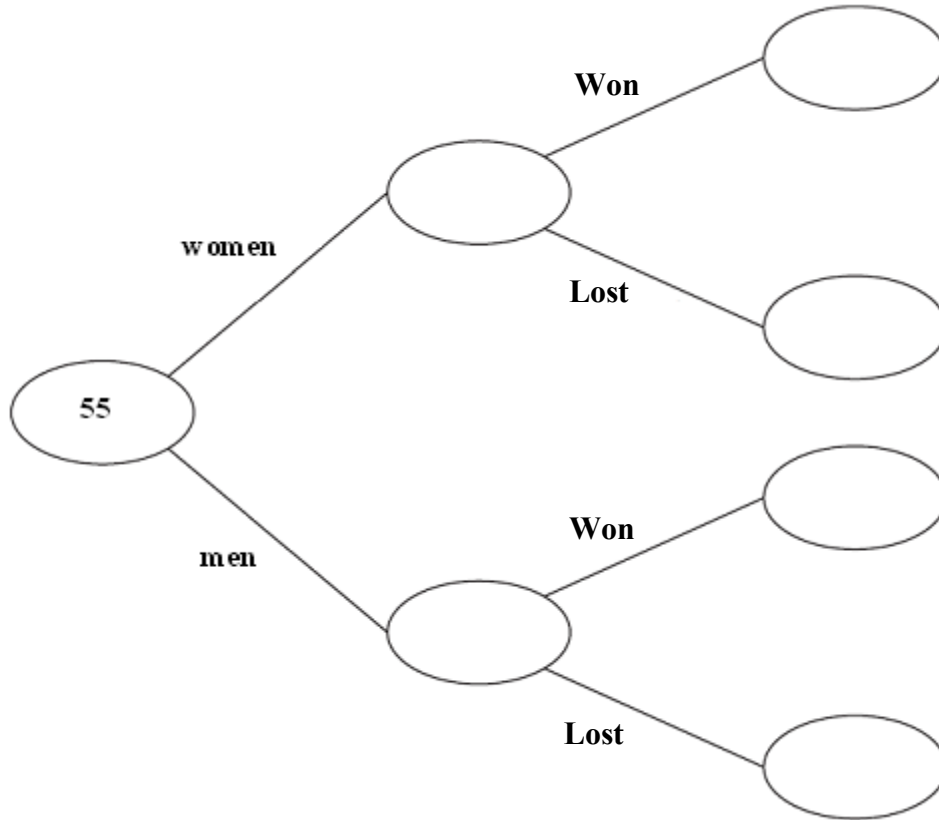
55 people each took part in a prize draw.

32 of these people were men.

21 of the 55 people won something in the prize draw.

14 of the women won a prize.

(a) Use this information to complete the frequency tree.



(3)

One of the women is chosen at random.

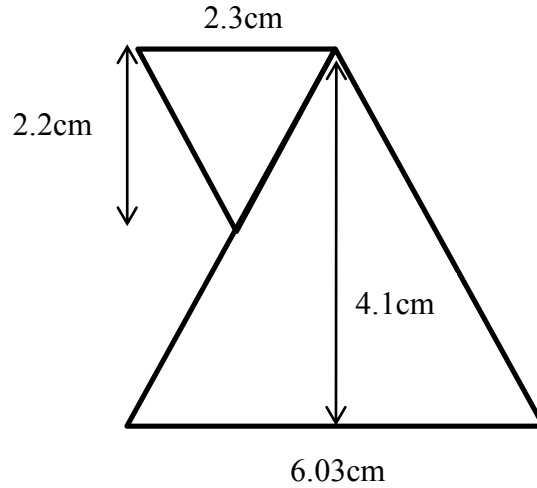
(b) Work out the probability that this woman did not win a prize.

.....
(2)

(Total 5 marks)

Question 12.

This shape is made from two triangles.



(a) Work out an estimate for the total area of the shape.

..... cm²
(3)

(b) Is your answer to (a) an overestimate or an underestimate?
Give a reason for your answer.

.....
.....
(1)
(Total 4 marks)

Question 13.

A department store sells handbags and shoes.

On Wednesday, the ratio of the number of handbags sold to the number of shoes sold was 3 : 5.

On Wednesday, the department store sold 222 handbags.

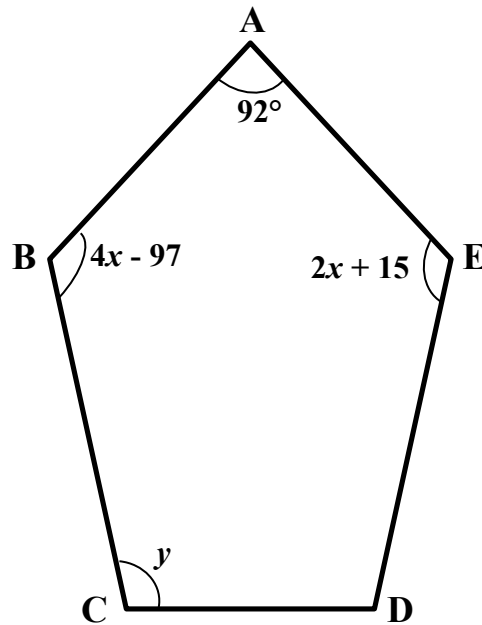
How many shoes were sold on Wednesday?

.....
(Total 2 marks)

Question 14.

ABCDE is an irregular pentagon.

$AB = AE$, $BC = DE$ and $\widehat{BAE} = 92^\circ$.



Find the size of the angle marked y .

.....
(Total 4 marks)

Question 15.

Change 3250 mm^3 into cm^3 .

..... cm^3

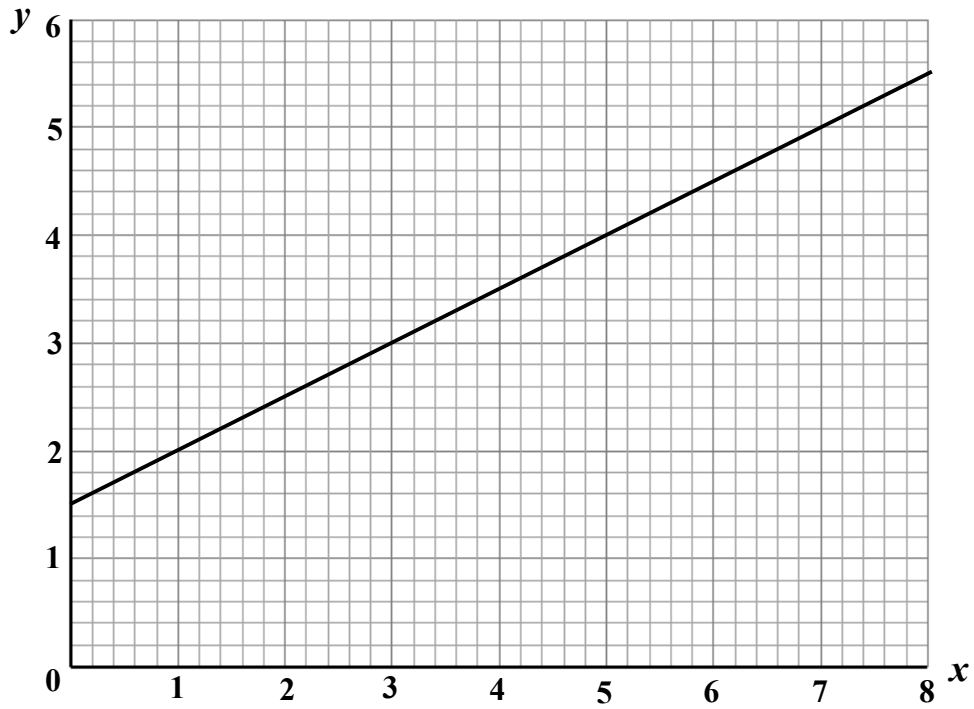
(Total 2 marks)

Question 16.

Work out $3\frac{4}{7} - 1\frac{2}{3}$

.....
(Total 3 marks)

Question 17.



The graph gives the values of y for values of x from 0 to 8.

(a) (i) Give an interpretation of the intercept of the graph on the y -axis.

.....
.....

(ii) Give an interpretation of the gradient of the graph.

.....
.....

(2)

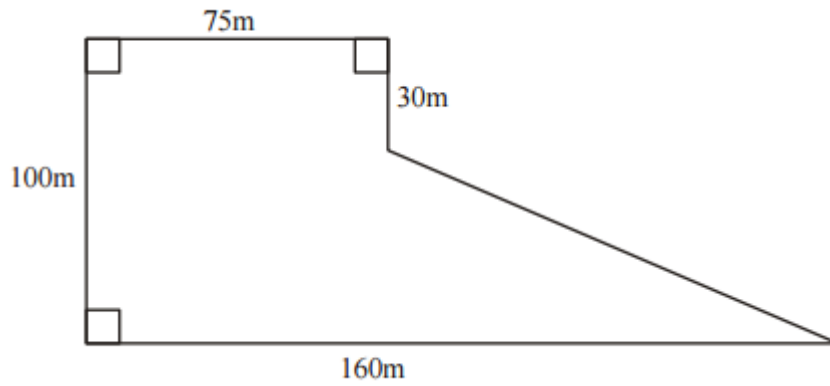
(b) Find the equation of the straight line in the form $y = m x + c$

.....

(3)

(Total 5 marks)

Question 18.



The diagram shows the plan of a field.
The farmer sells the field for £3 per square metre.
Work out the total amount of money the farmer should get.

£.....
(Total 5 marks)

Question 19.

Here is part of a railway time table.

Departure Times				
Newcastle	0840	0935	1040	1122
York	0943	1034	1144	1225
Leeds	1010	–	1210	–
Derby	1124	1157	1324	1355
Birmingham	1215	1315	1415	1515

A train leaves Newcastle at 1040.

(a) How long is the journey to Birmingham for this train?

Give your answer in hours and minutes.

.....hrs.....mins
(3)

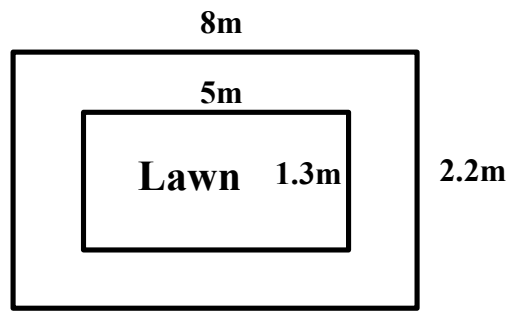
(b) The train ticket from York to Derby costs £64 plus 2.5% booking fee.
Workout how much a ticket from York to Derby will cost in total.

£.....
(3)

(Total 6 marks)

Question 20.

The diagram shows a rectangular garden with a path around the edge.



Farhan is going to cover the path with rectangular tiles.

Each tile is 25 cm by 10 cm.

He chooses to tile the path in white, red and black colours.

The ratio of the number of white tiles to the number of red tiles to the number of black tiles will be 5 : 3 : 4.

(a) Assuming there are no gaps between the tiles, how many tiles of each colour will Farhan need?

white tiles

red tiles

black tiles

(5)

Farhan is told that he should leave gaps between the tiles.

(b) If Farhan leaves gaps between the tiles, how could this affect the number of tiles he needs?

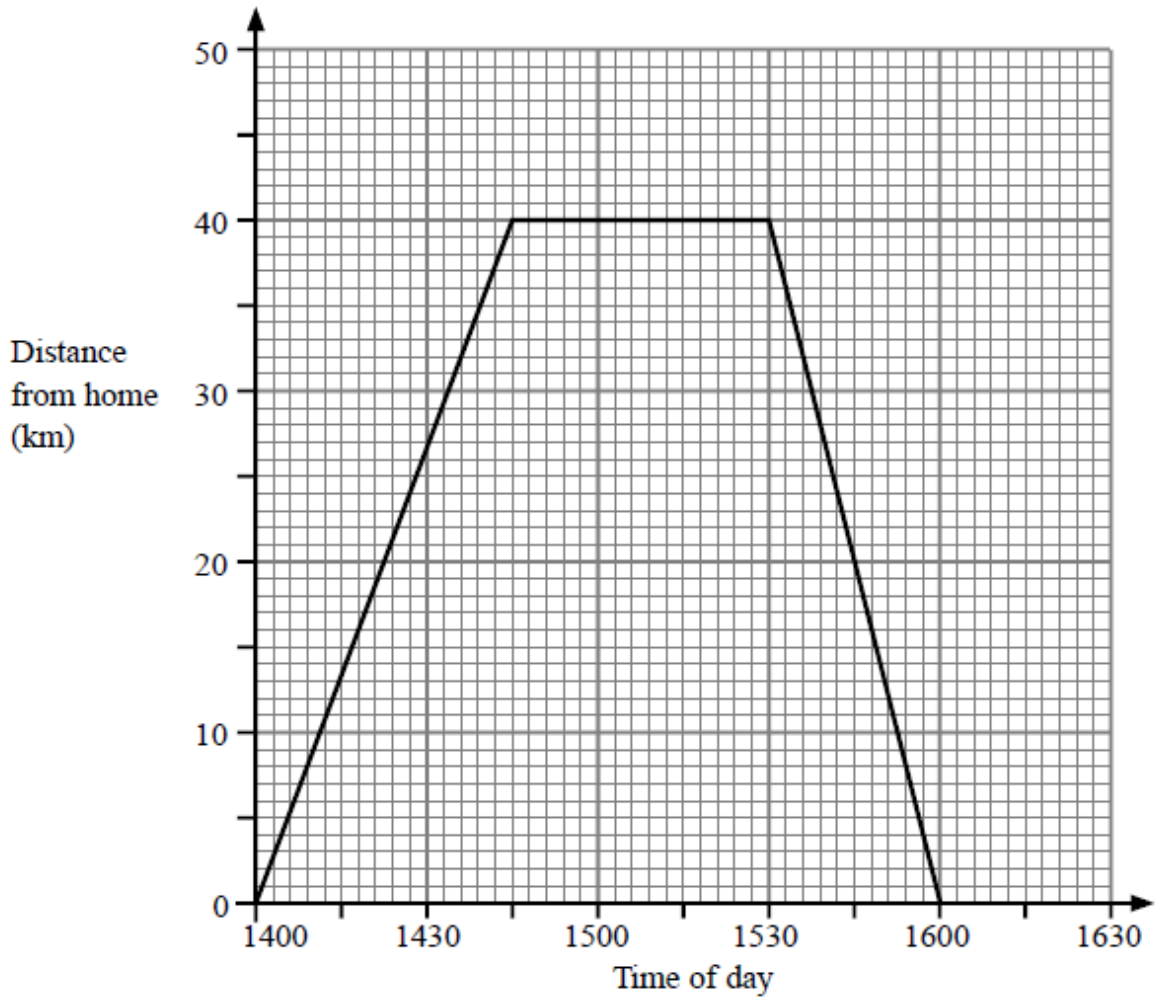
.....
.....

(1)

(Total 6 marks)

Question 21.

Judy drove from her home to the airport.
She waited at the airport. Then she drove home.
Here is the distance-time graph for Judy's complete journey.



(a) What is the distance from Judy's home to the airport?

..... km
(1)

(b) For how many minutes did Judy wait at the airport?

..... minutes
(1)

(c) Work out Judy's average speed on her journey home from the airport.
Give your answer in kilometres per hour.

..... km/hr
(2)

(Total 4 marks)

Question 22.

Write 420 as a product of its prime factors.

.....
(Total 3 marks)

TOTAL FOR PAPER IS 80 MARKS