

Write your name here	
Surname	Other names
<b>Pearson Edexcel</b>	Centre Number
Level 1/Level 2 GCSE (9-1)	Candidate Number
<h1 style="margin: 0;">Mathematics</h1> <h2 style="margin: 0;">Paper 3 (Calculator)</h2> <h3 style="margin: 0;">Aiming for 4</h3> <h3 style="margin: 0; float: right;">Foundation Tier</h3>	
Spring 2019 Practice Paper	Paper Reference
Time: 1 hour 30 minutes	<b>1MA1/3F</b>
<b>You must have:</b> Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.	Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may be used.**
- If your calculator does not have a  $\pi$  button, take the value of  $\pi$  to be 3.142 unless the question instructs otherwise.



### Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

**Answer ALL questions.**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

1. Here are the first 4 terms of a sequence.

2            9            16            23

- (a) Write down the next term in the sequence.

.....  
(1)

- (b) Explain how you got your answer.

.....  
(1)

**(Total for Question 1 is 2 marks)**

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2. Write 3758 correct to the nearest 1000.

.....  
**(Total for Question 2 is 1 mark)**

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3. Write  $\frac{9}{10}$  as a decimal.

.....  
**(Total for Question 3 is 1 mark)**

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4. Here are four digits.

7      3      4      9

Use three of these digits to write down the largest possible 3-digit number.

.....  
(Total for Question 4 is 1 mark)

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5. David has twice as many cousins as Becky.  
Becky has twice as many cousins as Nishat.  
Nishat has 6 cousins.  
How many cousins does David have?

.....  
(Total for Question 5 is 2 marks)

---

6. The table gives information about the prices of cinema tickets.

<b>Cinema ticket</b>	<b>Price</b>
adult ticket	£7.80
child ticket	£5.80
family ticket (for 4 people)	£24.30

Mr Edwards and his 3 children go to the cinema.

It is cheaper for Mr Edwards to buy 1 family ticket rather than 4 separate tickets.

How much cheaper?

.....  
**(Total for Question 6 is 3 marks)**

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7. Bronwin works in a restaurant.

The table gives her rates of pay.

<b>Day</b>	<b>Rate of pay</b>
Monday to Friday	£8.40 per hour
Weekend	£11.20 per hour

Bronwin worked for a total of 20 hours last week.

She worked 8 of these 20 hours at the weekend.

Show that Bronwin was paid less than £200 last week.

**(Total for Question 7 is 3 marks)**

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8. Find the value of  $(3.54 - 0.96)^2 - 4.096$

.....  
**(Total for Question 8 is 2 marks)**

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9. Here are four different digits.

8      2      1      6

Put one of these digits in each box to give the smallest possible answer to the sum.  
You must use each digit only once.

+

**(Total for Question 9 is 1 mark)**

---

10. Simplify  $y + 3y - 2y$

.....  
**(Total for Question 10 is 1 mark)**

---

11. Write the number 2538 correct to the nearest hundred.

.....  
(Total for Question 11 is 1 mark)

---

12. Find the value of  $\sqrt{1.44 \times 3.61}$

.....  
(Total for Question 12 is 1 mark)

---

13. The film starts at 6.45 p.m.  
The film lasts 102 minutes.  
What time does the film finish?

.....  
(Total for Question 13 is 2 marks)

---

14. Here are the first 4 terms of a sequence.

2            9            16            23

Work out the 10th term of the sequence.

.....  
(Total for Question 14 is 1 mark)

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15. This is part of a bus timetable between Bury and Manchester.

<b>Bury</b>	08 25	08 55	09 15	09 30	09 45	10 05
Whitefield	08 34	09 04	09 24	09 39	09 54	10 14
Heaton Park	08 46	09 16	09 36	09 51	10 06	10 27
Cheetham	08 56	09 26	09 46	10 01	10 16	10 37
<b>Manchester</b>	09 05	09 35	09 55	10 10	10 25	10 48

How many minutes should the 08 25 bus take to go from Bury to Manchester?

..... minutes

**(Total for Question 15 is 1 mark)**

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16. Write 0.3 as a percentage.

.....%

**(Total for Question 16 is 1 mark)**

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17. Complete the table of values for  $y = \frac{1}{2}x - 1$


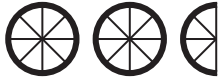

$x$	-2	-1	0	1	2	3
$y$	-2				0	

**(Total for Question 17 is 2 marks)**

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18. The incomplete pictogram shows information about the number of cycles sold in a shop on Tuesday, on Wednesday and on Thursday.

Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Key:

A total of 20 cycles were sold on Tuesday, Wednesday and Thursday.

8 cycles were sold on Friday.

15 cycles were sold on Saturday.

Use this information to complete the pictogram.

**(Total for Question 18 is 3 marks)**

19. Thais has a large bottle of shampoo.  
 There are 2 litres of shampoo in the large bottle.  
 Thais also has some empty small bottles.  
 Each small bottle can be completely filled with 150 ml of shampoo.  
 How many small bottles can be completely filled with shampoo from the large bottle?

.....  
**(Total for Question 19 is 3 marks)**

20. Jack's driving school has two offers.

<p style="text-align: center;"><b>Offer 1</b></p> <p style="text-align: center;">First driving lesson free</p> <p style="text-align: center;">All other driving lessons normal price</p>
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<p style="text-align: center;"><b>Offer 2</b></p> <p style="text-align: center;">All driving lessons</p> <p style="text-align: center;">5% off the normal price</p>
---

The normal price of a driving lesson is £24.

Douglas is going to have 12 driving lessons.

Which is the cheaper offer for 12 driving lessons, Offer 1 or Offer 2?  
You must show how you get your answer.

**(Total for Question 20 is 3 marks)**

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21. Rehan is asked to find the range of the numbers 3 1 8 7 5

Here is his working.

$$\text{Range} = 5 - 3 = 2$$

This is wrong.

Explain why.

.....

.....

**(Total for Question 21 is 1 mark)**

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22. This is part of a bus timetable between Bury and Manchester.

<b>Bury</b>	08 25	08 55	09 15	09 30	09 45	10 05
Whitefield	08 34	09 04	09 24	09 39	09 54	10 14
Heaton Park	08 46	09 16	09 36	09 51	10 06	10 27
Cheetham	08 56	09 26	09 46	10 01	10 16	10 37
<b>Manchester</b>	09 05	09 35	09 55	10 10	10 25	10 48

Daniel goes from Whitefield to Manchester by bus.

Daniel takes 17 minutes to get from his house to the bus stop in Whitefield.

He takes 15 minutes to get from the bus stop in Manchester to work.

Daniel has to get to work by 10 a.m.

He leaves his house at 8.45 a.m.

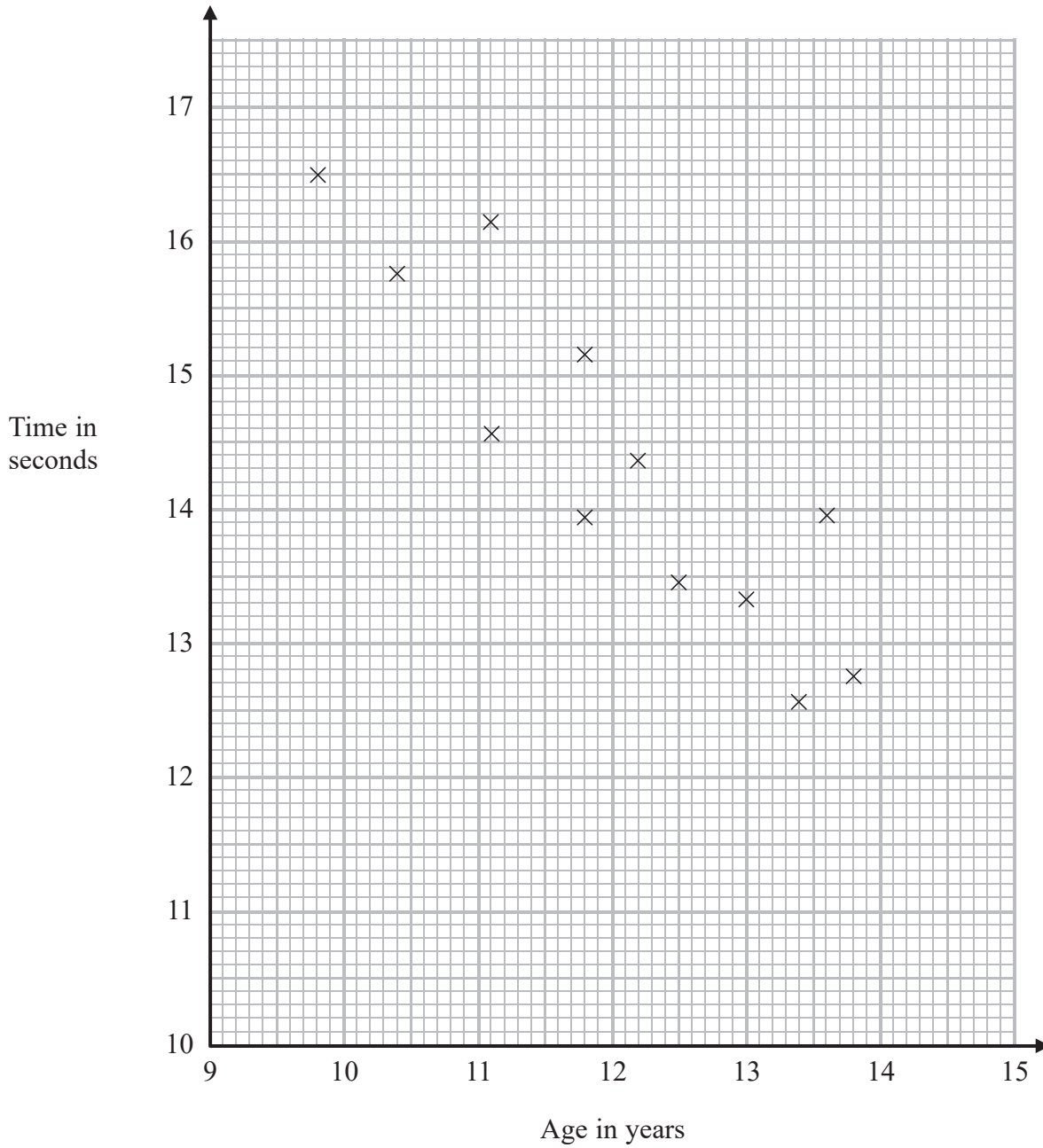
Does Daniel get to work by 10 a.m.?

You must show all your working.

**(Total for Question 22 is 3 marks)**

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23. The scatter diagram shows information about 12 girls.  
It shows the age of each girl and the best time she takes to run 100 metres.



(a) Write down the type of correlation.

.....

Kristina is 11 years old.

Her best time to run 100 metres is 12 seconds.

The point representing this information would be an outlier on the scatter diagram.

(b) Explain why.

.....

.....

(1)

(Total for Question 23 is 2 marks)

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24. Write down all the factors of 18.

.....

(Total for Question 24 is 2 marks)

---

25. Write down all the factors of 30.

.....

(Total for Question 25 is 2 marks)

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26. Here are the marks 20 students got in a French test.

76    82    84    69    80    64    70    81    75    91  
87    67    80    70    94    76    81    69    71    77

(a) Show this information in a stem and leaf diagram.



**(Total for Question 26 is 3 marks)**

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27. Nidah writes down two different prime numbers.

She adds together her two numbers.

Her answer is a square number less than 30.

Find two prime numbers that Nidah could have written down.

..... , .....

**(Total for Question 27 is 2 marks)**

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28. 2.5 kg of apples cost £3.60.  
Work out the cost of 3.5 kg of apples.

£.....

**(Total for Question 28 is 2 marks)**

---

29. Factorise  $4m + 12$

.....

**(Total for Question 29 is 1 mark)**

---

30. Work out the value of  $\frac{2.645 \times 10^9}{1.15 \times 10^3}$   
Give your answer in standard form.

.....

**(Total for Question 30 is 2 marks)**

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31. Alan, Bispah and Chan share a sum of money.

Alan gets  $\frac{1}{8}$  of the money.

Bispah gets  $\frac{1}{2}$  of the money.

Chan gets the rest of the money.

Alan gets £2.50

Work out how much money Bispah gets.

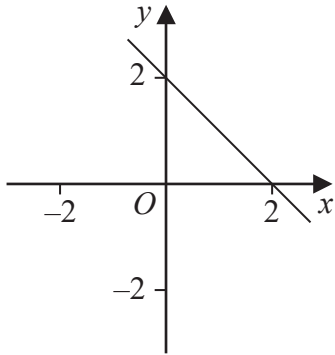
£.....

**(Total for Question 31 is 2 marks)**

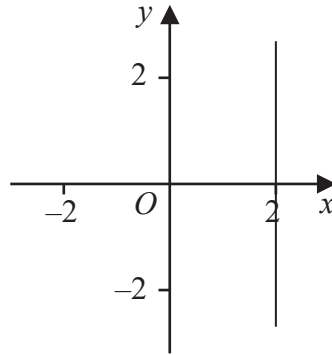
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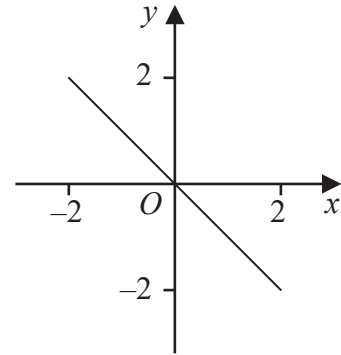
32. Here are six straight line graphs.



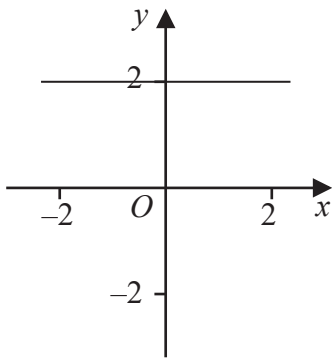
Graph A



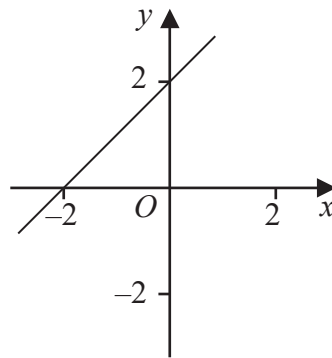
Graph B



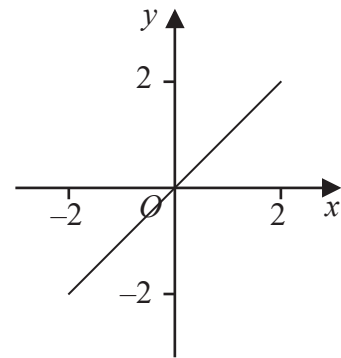
Graph C



Graph D



Graph E



Graph F

Match each equation in the table to the correct graph.  
Write the letter of the graph in the table.

Equation	Graph
$y = 2$	
$y = x$	
$x + y = 2$	

(Total for Question 32 is 2 marks)

33. Jenny is asked to find the value of  $12 - 2 \times 4$

Here is her working.

$$12 - 2 \times 4 = 10 \times 4 = 40$$

Jenny's answer is wrong.

Explain what Jenny has done wrong.

.....  
.....

**(Total for Question 33 is 1 mark)**

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34. Last year the cost of a season ticket for a football club was £560.

This year the cost of a season ticket for the club has been increased to £600.

Write down the increase in the cost of a season ticket as a fraction of last year's cost.

.....

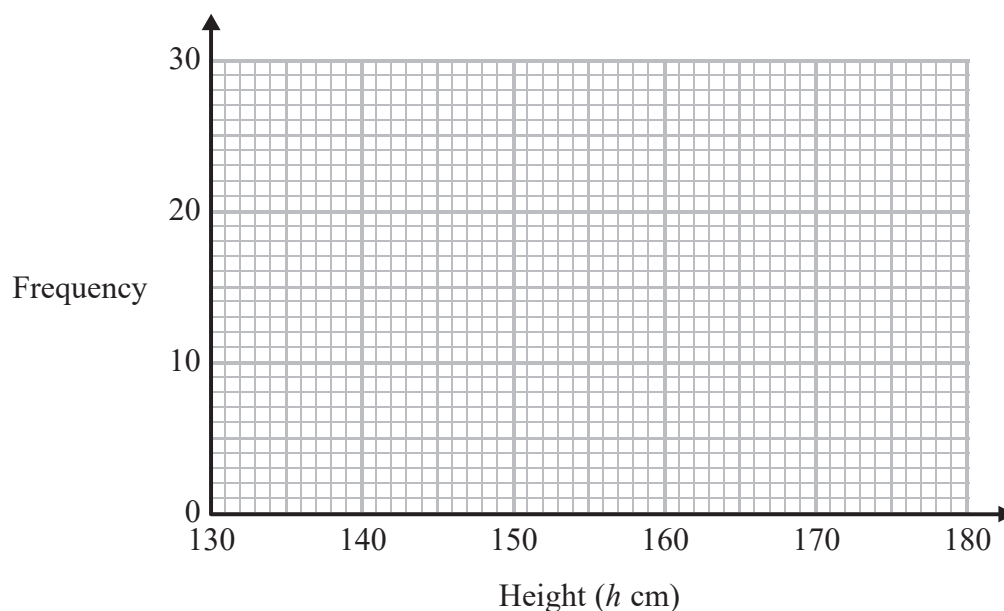
**(Total for Question 34 is 2 marks)**

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35. The table shows information about the heights of 80 children.

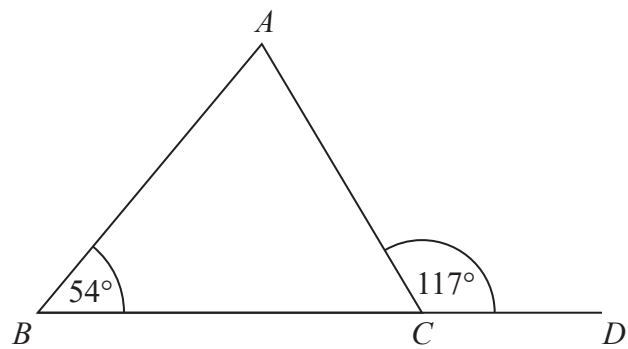
Height ( $h$ cm)	Frequency
$130 < h \leq 140$	4
$140 < h \leq 150$	11
$150 < h \leq 160$	24
$160 < h \leq 170$	22
$170 < h \leq 180$	19

(b) Draw a frequency polygon for the information in the table.



(Total for Question 35 is 2 marks)

36.



$BCD$  is a straight line.

$ABC$  is a triangle.

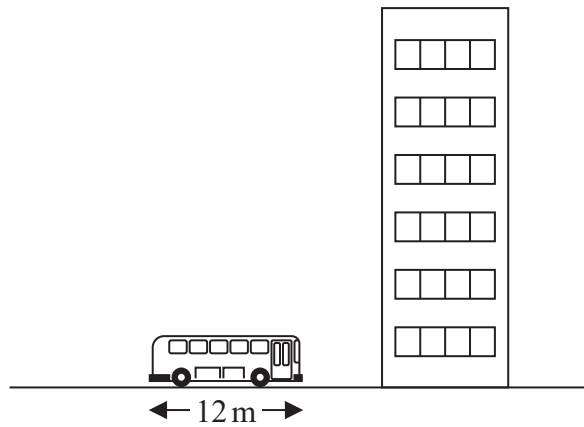
Show that triangle  $ABC$  is an isosceles triangle.

Give a reason for each stage of your working.

(Total for Question 36 is 4 marks)

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37.



The picture shows a bus next to a building.

The bus has a length of 12 m.

The bus and the building are drawn to the same scale.

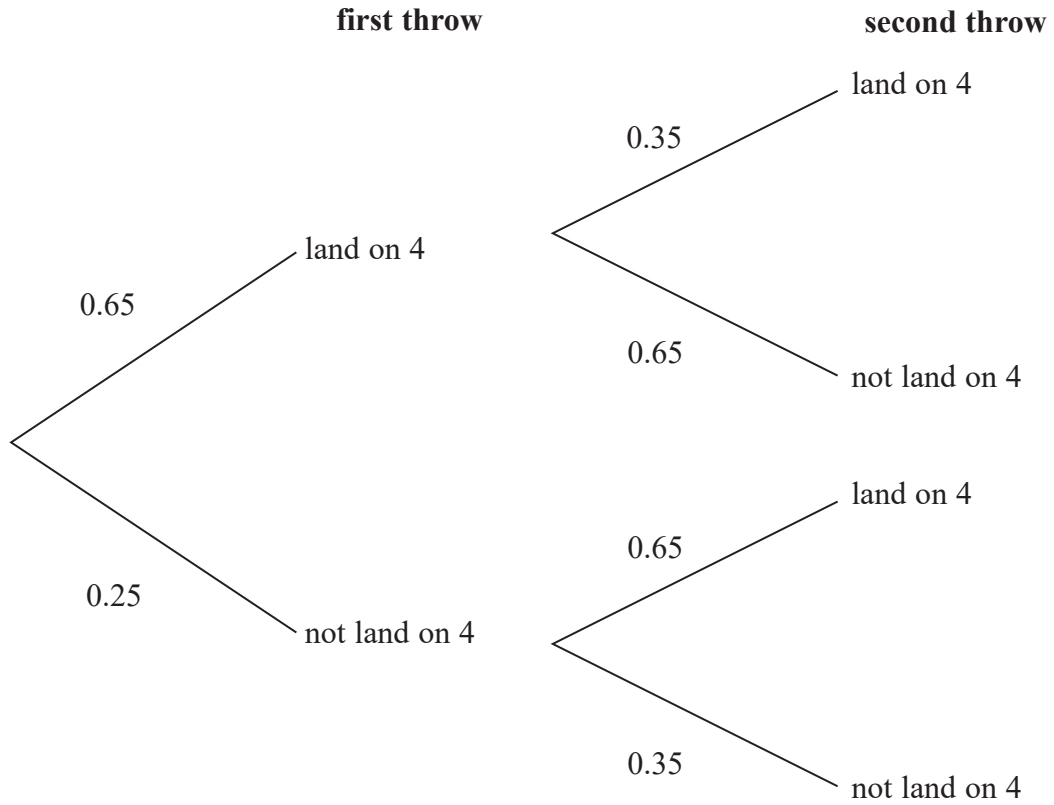
Work out an estimate for the height, in metres, of the building.

..... m

**(Total for Question 37 is 2 marks)**

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38. When a biased 6-sided dice is thrown once, the probability that it will land on 4 is 0.65  
 The biased dice is thrown twice.  
 Amir draws this probability tree diagram.  
 The diagram is **not** correct.



Write down **two** things that are wrong with the probability tree diagram.

- 1.....  
 .....  
 2.....  
 .....

**(Total for Question 38 is 2 marks)**

39. Expand and simplify  $5(p + 3) - 2(1 - 2p)$

.....  
(Total for Question 39 is 2 marks)

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40. Work out  $(13.8 \times 10^7) \times (5.4 \times 10^{-12})$   
Give your answer as an ordinary number.

.....  
(Total for Question 40 is 2 marks)

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41. Here are the marks 20 students got in a French test.

76	82	84	69	80	64	70	81	75	91
87	67	80	70	94	76	81	69	71	77

One of these students is going to be chosen at random.

The pass mark in the French test is 71.

Omar writes,

The probability that this student failed the French test is  $\frac{1}{4}$

Omar is wrong.

Explain why.

.....

.....

**(Total for Question 41 is 2 marks)**

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42. Jim thinks of a number.

$\frac{2}{3}$  of Jim's number is 48.

Work out  $\frac{5}{6}$  of Jim's number.

.....

**(Total for Question 42 is 2 marks)**

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**TOTAL FOR PAPER IS 80 MARKS**