11 + Entrance Examination

Paper 4

Maths (Non-Calculator)

You have 70 minutes (1 hour 10 minutes) to complete this paper.

Do as many questions as you can and keep an eye on the time.

Calculators are **not** allowed.

Show your working in the spaces provided and write your answers on the lines. If you do not show enough working you may not get any marks. Be sure to include units in your answers where appropriate.

Each question is worth 2 marks. The total number marks for the paper is 80.

Full name .....

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1. **Work out** 2000×0.45

_____ (2 marks)

2. **Write twenty four thousand and forty two in figures.**

_____ (2 marks)

3. **The mean of the eleven digits in Tom's phone number is 5.**
Some of the digits in his phone number are shown below.
The eleventh digit is one more than the seventh digit.

What is Tom's phone number?

0	7	9	4	9	3		6	4	2	

_____ (2 marks)

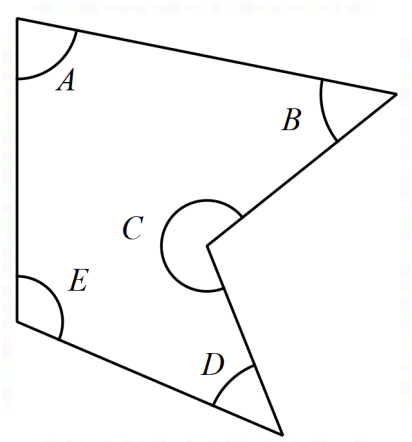
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4. **The perimeter of a regular octagon is 120 cm.**

What is the length of one of its sides?

_____ (2 marks)

5. **Look at the shape below. Which of the labelled angles is a reflex angle?**



_____ (2 marks)

6. **How many seconds are there in one and a half hours?**

_____ (2 marks)

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7. The table below shows the results of a race taken by 5 boys.

Who came last?

Name	Time (seconds)
Alfie	34.36
Ellis	33.59
Fergus	34.6
Glenn	33.5
Rowan	34.04

_____ (2 marks)

8. Find the number exactly halfway between 4.91 and 5.01.

_____ (2 marks)

9. A shop reduces the price of a mobile phone by 15%. They usually cost £220 each.

How much would it cost to buy two of the mobile phones?

_____ (2 marks)

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10. Which of the options below will equal 1000?

A **1645 rounded to the nearest 1000**

B **851 rounded to the nearest 100**

C **957 rounded to the nearest 100**

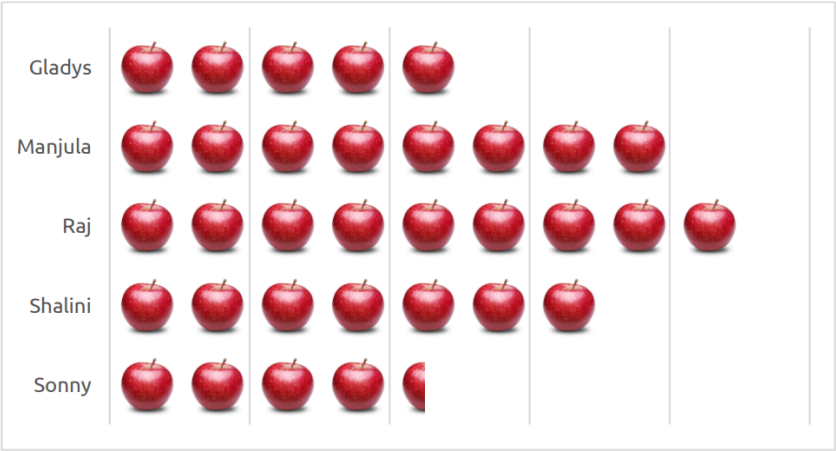
D **957 rounded to the nearest 10**

E **1234 rounded to the nearest 100**

_____ (2 marks)

11. The pictogram below shows the number of apples eaten by five people over two weeks.

What is the ratio of apples eaten by Sonny to those eaten by Raj?



_____ (2 marks)

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12. The temperature outside is $-5°C$ and the temperature inside is $22°C$ warmer.

What is the temperature inside?

_____ (2 marks)

13.

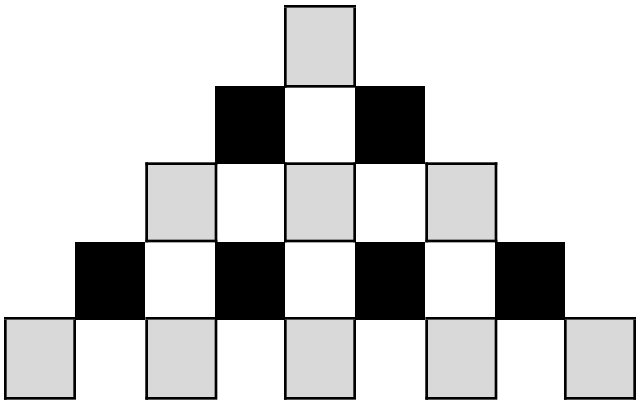
Milk Bottle	**£1.10**
Eggs (per dozen)	**£2.20**
Cheese	**90p**

Using the price list above, how much would it cost to buy two bottles of milk, six eggs, and a packet of cheese.

_____ (2 marks)

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14. Ronnie uses black and grey squares on white paper to make this pattern.



He then draws two more rows to continue the pattern.
How many grey squares will he have drawn in total?

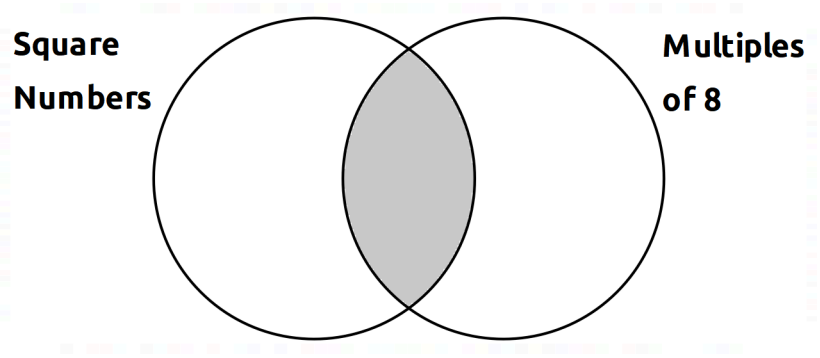
_____ (2 marks)

15. Fiona is thinking of a two digit number. It is a factor of 90. Its digits add up to an even number. What number is Fiona thinking of?

_____ (2 marks)

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16. Which numbers, between 0 and 100, would go in the shaded area of the Venn Diagram?



_____ (2 marks)

17. The area of a circle is roughly $3r^2$, where *r* is the radius of the circle.

Roughly, what is the area of a circle with diameter 6 cm?

_____ (2 marks)

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18. **If $15 \times 823 = 12345$ then what is $123.45 \div 15$?**

_____ (2 marks)

19 **If $x > 31.55$ then which of these could be x ?**

A **30.55**

B **29.99**

C **31.48**

D **31.7**

E **31.5**

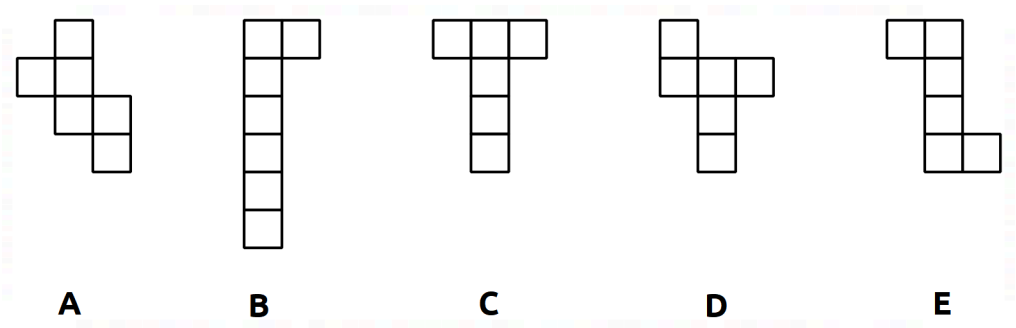
_____ (2 marks)

20. **What is the remainder when 125 is divided by 15?**

_____ (2 marks)

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21. Which of these nets will not fold up to make a cube?



_____ (2 marks)

22. What is the next number in this sequence?

$1\frac{3}{4}$ $1\frac{1}{2}$ $\frac{3}{4}$ $\frac{1}{4}$

_____ (2 marks)

23. A tap drips 2 ml of water every 12 minutes. How long will it take to drip 21 ml of water?

_____ (2 marks)

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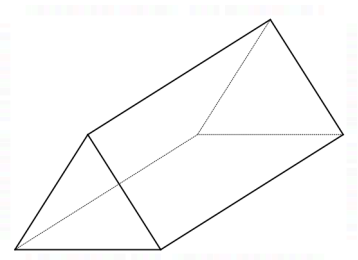
24. Entry to a cinema costs £2.45 per child and £5.50 per adult. How much is the total cost for 12 children and 2 adults?

_____ (2 marks)

25. Sophie is making party bags for 14 friends. She puts three different toys into each bag. The toys come in packs of five. How many packs will Sophie need to buy?

_____ (2 marks)

26. How many vertices are there on a triangular prism?



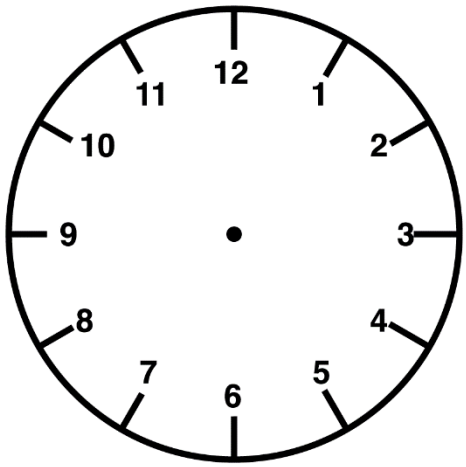
_____ (2 marks)

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27. A recipe for 24 chocolate brownies needs 300g of butter. How many chocolate brownies can I make with 3.5 kg of butter?

_____ (2 marks)

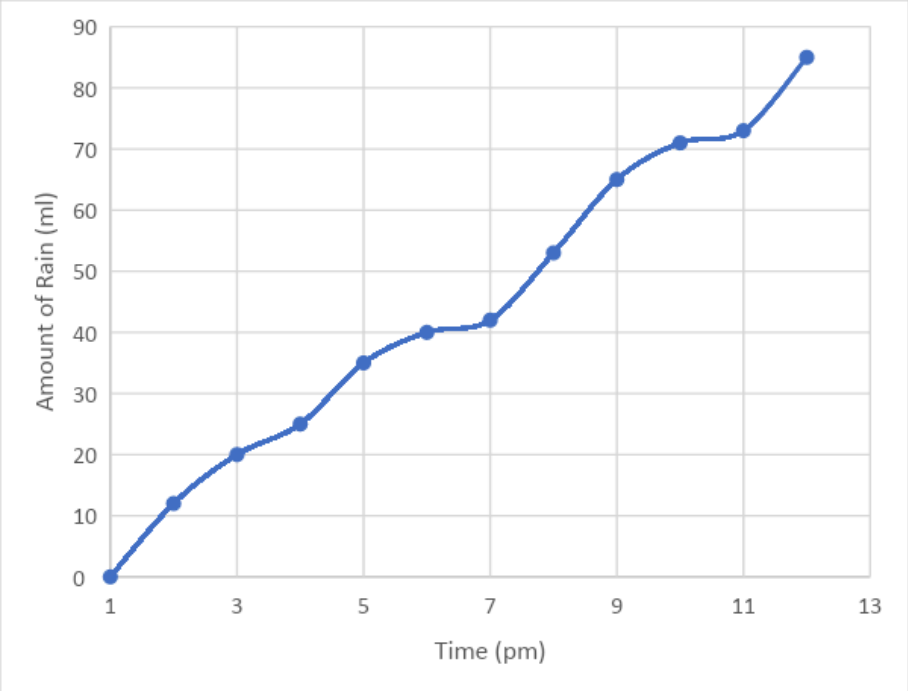
28. What angle will the minute hand (the long hand) of a clock turn through from 8:25 to 8:45?



_____ (2 marks)

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29. Every hour, Amir measures the amount of rainfall he collects in a tub in his garden. He draws a graph of his results. How much rain does he collect between 3 pm and 9 pm?



_____ (2 marks)

30. Which of these is not a multiple of 17?

A 51

B 85

C 102

D 121

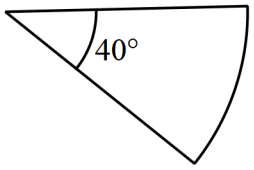
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_____ (2 marks)

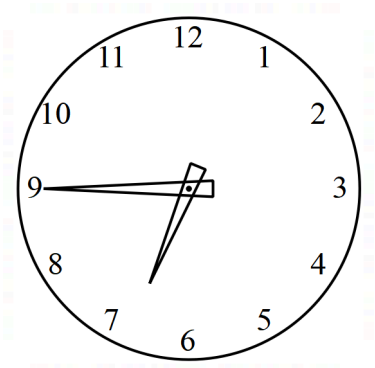
31. I cut a slice of pizza, as shown below, from a whole pizza.

What fraction of the whole pizza is left?



_____ (2 marks)

32. I watched a film on TV. It started at the time shown on the clock below.



The film finished at 2115. How long did the film last?

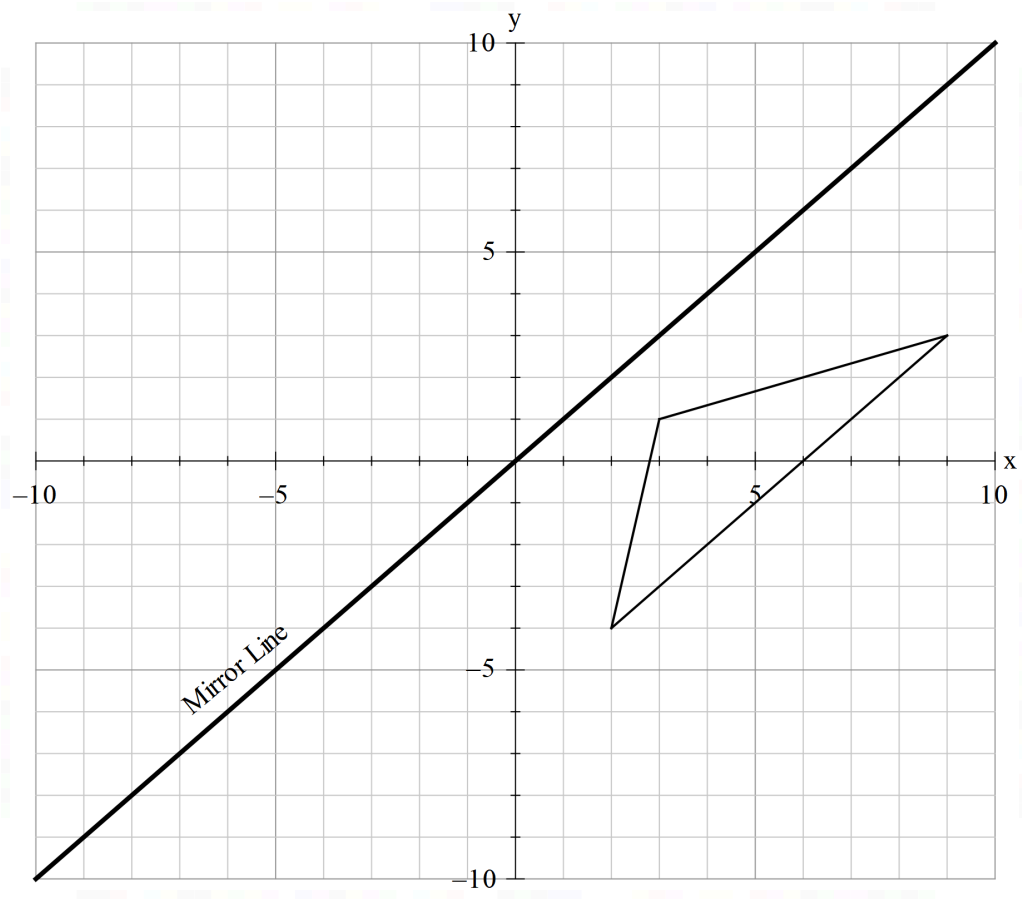
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_____ (2 marks)

33. To make 3 pints of ice cream you need ½ a cup of cold milk. If one cup is equal to half a pint, what fraction of the 3 pints of ice cream is cold milk?

_____ (2 marks)

34. On the diagram below, reflect the triangle in the mirror line shown.



(2 marks)

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35. **What is $\frac{9.8 \times 5.1}{1.9}$ rounded to the nearest whole number?**

A **7**

B **1**

C **30**

D **25**

E **4**

_____ (2 marks)

36. **A box of 40 packets of crisps weighs 1.2 kg. The box weighs 200 g, when empty. How much does each packet of crisps weigh?**

_____ (2 marks)

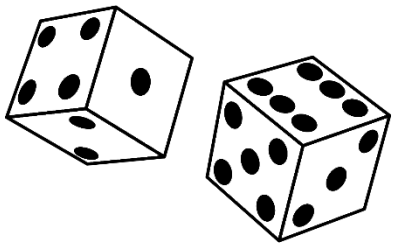
37. **What is the mean number of letters in the words of this sentence?**

_____ (2 marks)

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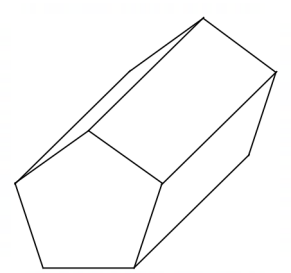
38. **The number of dots on the opposite faces of a die add up to 7.**

In the picture below, what is the total number of dots on the faces that you cannot see?



_____ (2 marks)

39.



The rectangular faces of this pentagonal prism each have an area of R and the pentagonal faces each have an area of P. The total surface area of the prism is

A **5R + 5P**

B **3R + P**

C **5R + 2P**

D **2R + 5P**

E **R + P**

_____ (2 marks)

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40. This is part of a bus timetable from Tower park to Poole Bus Station

Tower Park	0934	0954	1014	1034	1054
Canford Heath	0940	1000	1020	1040	1100
Oakdale	0954	1014	1034	1054	1114
Poole Bus Station	1000	1020	1040	1100	1120

Manjit lives in Canford Heath and his home is ten minutes walk from the bus top. He wants to get to Poole Bus Station by 1045.

What is the latest time he could leave home without being late?

_____ (2 marks)

End

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Answers

1. **900**

2. **24042**

3. **07949 356426**

4. **15 cm**

5. **C**

6. **5400**

7. **Fergus**

8. **4.96**

9. **£374**

10. **C**

11. **1 : 2**

12. **17°C**

13. **£4.20**

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14. **16**

15. **15**

16. **16 and 64**

17. **27 cm^2**

18. **8.23**

19. **D**

20. **5**

21. **B**

22. **- ½**

23.. **126 minutes or 2 hours 6 minutes**

24. **£40.40**

25. **9**

26. **6**

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27. **280**

28. **120°**

29. **45 ml**

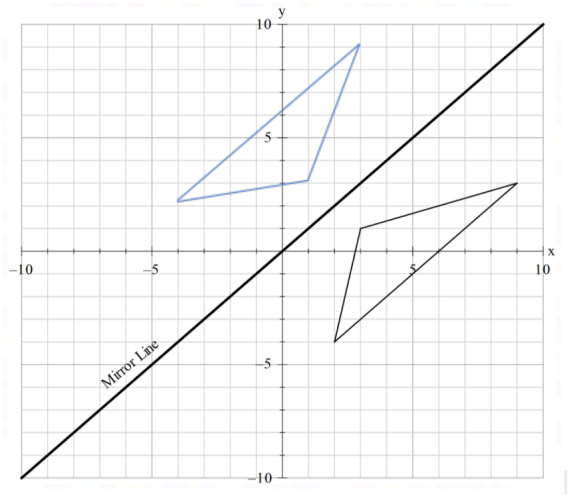
30. **D**

31. **8/9**

32. **$2\frac{1}{2}$ hours**

33. **1/12**

34.



Co-ordinates at (-4,2), (3,9) and (1,3)

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35. **D**

36. **25 g**

37. $\frac{52}{13} = 4$

38. **21**

39. **D**

40. **1010**

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