Kent College

11+ MATHEMATICS PAPER
- SAMPLE -

TIME ALLOWED: **ONE HOUR**

All working must be clearly shown and must be set out in the space provided. Attempt as many questions as you can, in any order.

Calculators may not be used.

Marks for each question are shown.

EQUIPMENT REQUIRED: **Ruler, pencil, pen, protractor**

Name:
Result:
Comment:

1. Find the value of

(a) 289 + 134

Answer _____ [1]

(b) 4716 - 1825

Answer _____ [1]

(c) 35 x 29

Answer _____ [1]

(d) 52.7 + 8.54 - 5.3

Answer _____ [1]

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2. Work out (a) 571 x 100

Answer . . . . . [1]

(b) 3.61 x 10

Answer . . . . . [1]

(c) 27 ÷ 1000

Answer . . . . . [1]

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3. Angela caught a train at 7.30 in the morning and arrived at Newcastle at 1.42 in the afternoon. How long did her journey take?

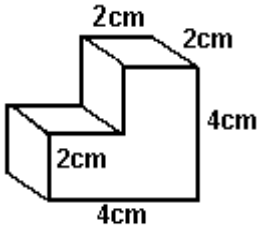
Answer . . . . . [1]

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4. (a) Find the volume of a cuboid with length 8 cm, width 5 cm and height 6 cm.

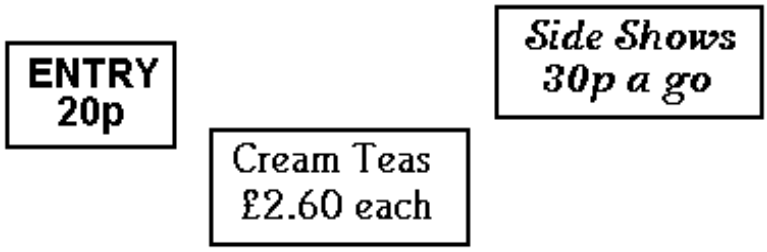
Answer _____ [1]

(b) Find the volume of this shape.



Answer . . . . . [2]

5.



(a) Mary goes to the school fair.

She pays to get in. She visits 3 side shows and she has a cream tea.

How much does Mary spend altogether?

Answer . . . . . [2]

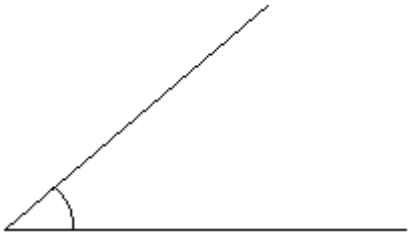
(b) Anna has £5 to spend at the school fair. She must pay to get in.

How many times can she visit a side show if she has a cream tea as well?

Answer . . . . . [2]

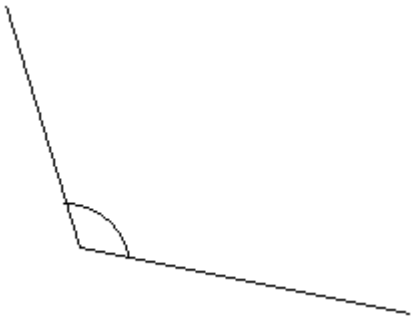
6. Accurately measure the angles below with a protractor

(a)



(a) Answer . . . . . [1]

(b)



(b) Answer . . . . . [1]

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7. Find $\frac{2}{5}$ of 30

Answer . . . . . [1]

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8. Work out 694 x 27. Show all your working.

Answer . . . . . [2]

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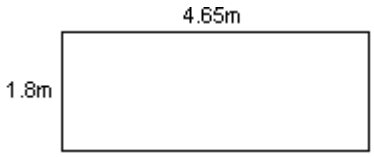
9. What percentage of this shape is shaded?



Answer . . . . . [1]

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10. Find the perimeter of this rectangle:

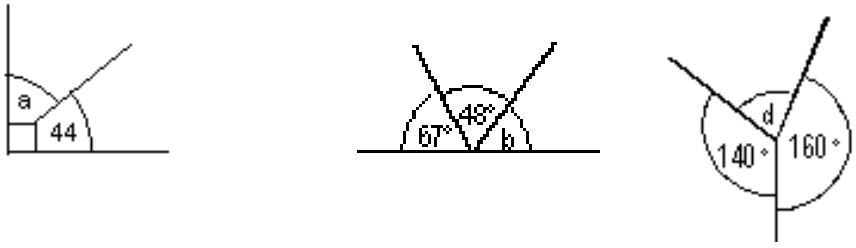


Answer . . . . . [1]

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11. Find the missing angles by calculation. The diagrams are not to scale:

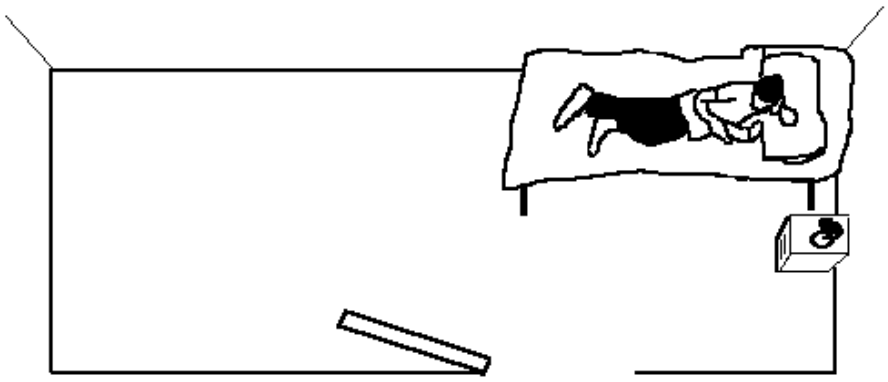
(a) **(b)** **(c)**



Answer(a) . . . . . **(b)** . . . . . **(c)** . . . . . [3]

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12. This is a drawing of a boy in his bedroom.



(a) **Estimate** the length of the real bed.

Answer : The bed is roughly . . . . . [1]

(b) Estimate the length of the real room.

Answer : The room is roughly . . . . . [1]

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13. Write down the fifth term of this sequence.

6,9,12,15, ...

Answer . . . . . . [1]

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14. An orange drink is made by mixing water with concentrated orange juice.

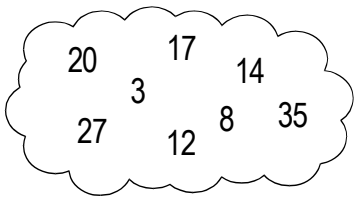
$\frac{3}{4}$ of the orange drink is water.

How many litres of water will be in 12 litres of orange drink?

Answer . . . . . [2]

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15. Look at the numbers in the cloud:



Write down any of these numbers which are:

(a) even **Answer** . . . . . [1]

(b) multiples of 5 **Answer** . . . . . [1]

(c) factors of 24 **Answer** . . . . . [1]

(d) prime numbers? **Answer** . . . . . [1]

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16. Here is part of a railway timetable

London King's Cross	10 30	11 30	12 35	13 25	14 30
Peterborough	11 24	12 35	13 27	14 15	15 45
Newcastle	13 36	14 58	15 39	17 05	17 30

(a) How long does it take the 10 30 from London to reach Peterborough?

Answer . . . . . . [2]

(b) If you set off from home on the 11.30 train from King's Cross and travelled to Newcastle before taking another 1 hour and 38 minutes to finish your jorney home at what time would you arrive home?

Answer . . . . . . [2]

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17. Pupils estimate their heights as

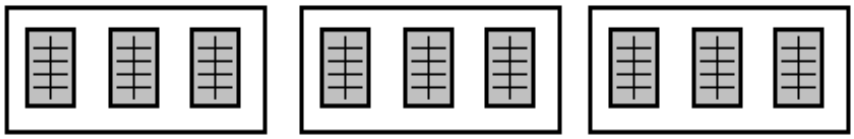
5m 120cm 50mm 8 feet

Which of these do you think might be correct?

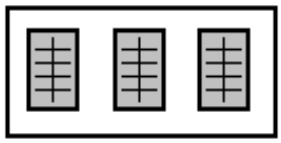
Answer . . . . . . [1]

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18. There are 3 tables in a room. There are 3 bars of chocolate on each table.



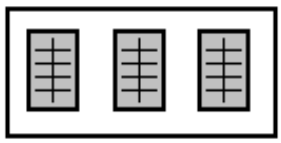
(a) Nine people sit at one table.
They share the chocolate **equally.**



What **fraction** of a bar do they each have?

Answer . . . . . [1]

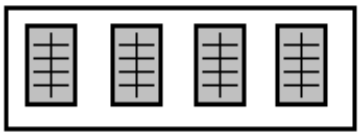
(b) Four people sit at another table.
They share the chocolate **equally.**



What **fraction** of a bar do they each have?

Answer . . . . . [1]

(c) In another room there are two tables. There are **four** bars of chocolate on one table.

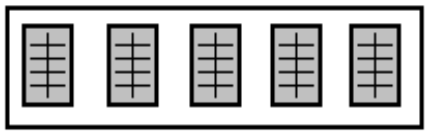


Twelve people sit at the table with four bars.

At each table they share the chocolate equally. Everyone in the room has the same fraction of a bar.

How many people sit at the table with five bars?
Show your working.

There are **five** on the other.



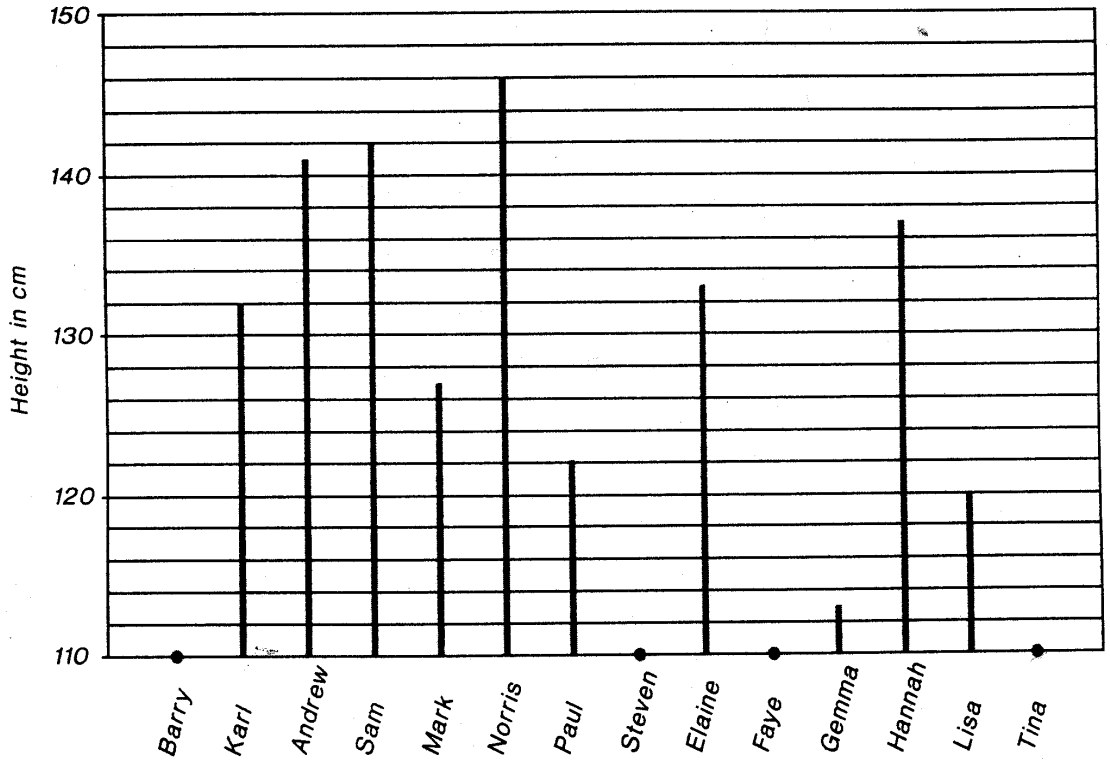
Some other people sit at the table with five bars.

Answer . . . . . [2]

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19. Pembury Youth centre held a Judo club on Tuesday evenings. At the beginning of the year the children's heights were recorded on a chart. (The last 6 names are the girls names.) Complete the chart for the four missing children using the information below.

1. Tina is the same height as Mark.
2. Faye is 20cm shorter than the tallest boy.
3. If Barry grew another 1 cm he would be the same height as the tallest girl.
4. Steven is 20cm taller than the shortest boy.



Now answer the following questions.

(a) What is the difference in height between the shortest member of the club and the tallest member?

Answer . . . . [1]

(b) Calculate the average height of the girls.

Answer . . . . [1]

(c) Which girl is closest to the girls' average height?

Answer . . . . [1]

(d) How tall is the shortest boy?

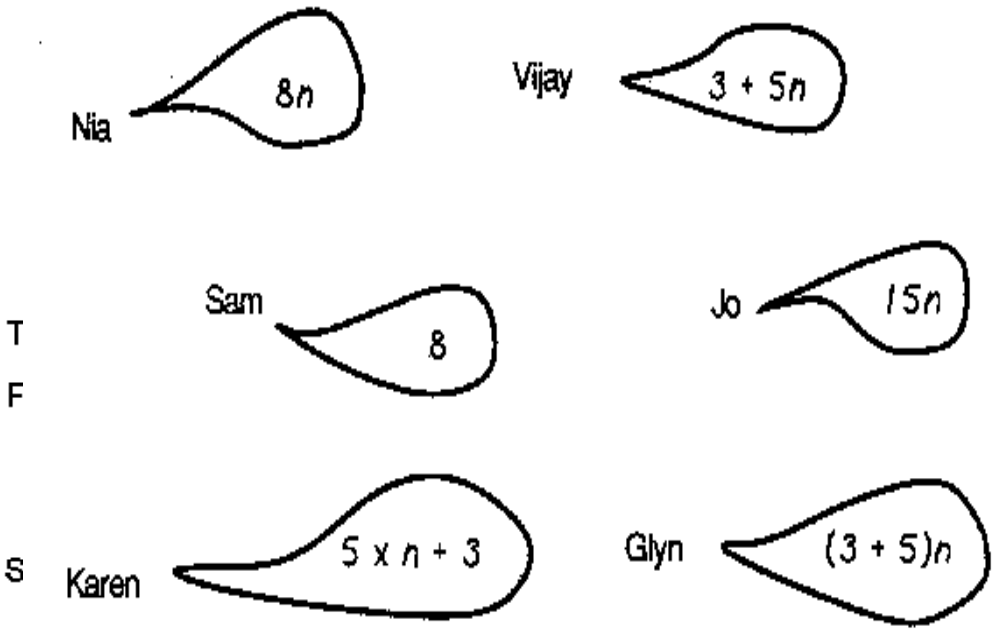
Answer . . . . [1]

20.

A teacher has 5 bags of marbles and 3 extra marbles.
Each bag has n marbles inside.

She asks: *'How many marbles are there altogether?'*

The pupils say:



T

F

S

There are 88 marbles altogether.

Fill in one pupil's right answer to help you complete the equation.

…… = 88

Solve the equation to find n, the the number of marbles in a bag.

Answer . . . . [2]

21. At a party we ordered 4 sausage rolls at 24 pence each, 5 hotdogs at 81p each and 7 drinks at 20 pence each.

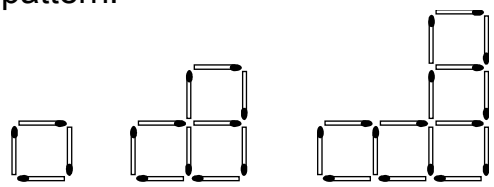
What is the total cost ?

Answer . . . . . [1]

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22. A number of shapes have been made with matches.

For this pattern:



(a) Draw the next 2 shapes [2]

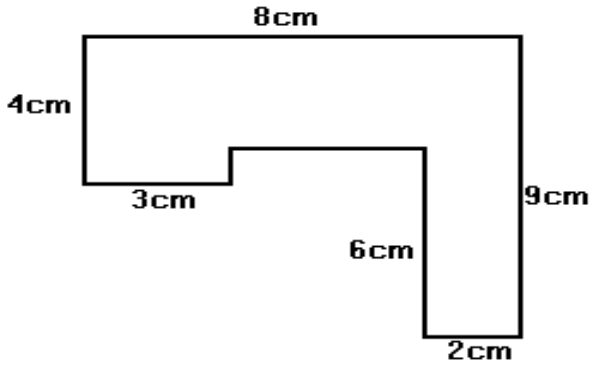
(b) Complete the table below, to show how many matches there are

Number of squares	1	3	5	6	7	20
Number of matches	4	10				

[4]

(c) Write down in words the rule to go from one shape to the next. (2)

23.



(a) Find the area of this shape.

Answer . . . . . . [2]

(b) Find the perimeter of the shape.

Answer . . . . . . [2]

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24. My calculator is broken. The only buttons that work are these.



Which sequence of buttons will enable me to get an answer of **11** on the screen of my calculator?

Answer _____ [3]

If you have time, try to find some more ways to get 11. **[Total 65]**

END OF EXAMINATION