FOREST
SCHOOL

11+

ENTRANCE AND SCHOLARSHIP SAMPLE PAPERS

Sample Paper 2

SAMPLE

FORESTSCHOOL
ENTRANCE EXAMINATION
MATHEMATICS

Calculators are **NOT** allowed
You are advised to show your working
Time: One hour

NAME.....

CANDIDATE NUMBER.....

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1 Work out 78 + 916

ANSWER.....

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2 Work out 567 - 89

ANSWER.....

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3 Work out 246 x 8

ANSWER.....

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4 Work out 234567 ÷ 9

ANSWER.....

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5 How many hours are there in 2 weeks?

ANSWER.....

TURN OVER

6 Eve bought 4 pencils and 5 crayons.
Each pencil cost 22p.
She paid with a £2 coin and received 32p change.
How much did each crayon cost?

ANSWER.....

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7 What fraction is bigger: two thirds or three quarters?
You must justify your answer clearly.

ANSWER.....

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8 Write in digits the number two million, twenty thousand and twenty.

ANSWER.....

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9 How many grams are there in 0.0025 kilograms?

ANSWER.....

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10 Gurveen is buying paint and there are three sizes of can to choose from:

One 2 litre can costs £15

One 3 litre can costs £20

One 4 litre can cost £25.

Which size is the best value for money?

Justify your answer carefully.

ANSWER.....

REASON.....

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11 Bill and Ben are packing Easter eggs in crates. They have a total of 103 Easter eggs to pack.

After a while Bill has filled 5 crates and has 12 Easter eggs left over, and Ben has filled 3 crates and has 19 Easter eggs still to pack.

How many Easter eggs fit in each crate?

ANSWER.....

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12 Calculate $4\frac{1}{2} - 1\frac{3}{4}$

ANSWER.....

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13 Alana has to take 10 millilitres of medicine three times a day.

How long would a 180 millilitre bottle last her?

ANSWER.....days

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14 Tomasc adds the same number to 23 and to 8 so that the first is then double the second. What was the number he used?

ANSWER.....

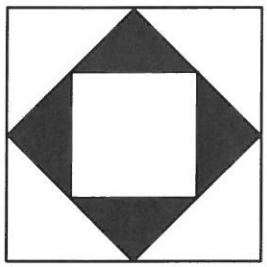
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15 My father was 31 on my 8th birthday.
How old will he be on my 30th birthday?

ANSWER.....

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16 What fraction of this square is shaded in?



ANSWER.....

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17 What is $6 \div 0.3$?

ANSWER.....

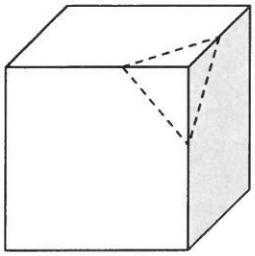
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18 Give every prime number that goes exactly into both 12 and 18.

ANSWER.....

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19 A cube has 8 vertices (corners), 6 faces and 12 edges.
Tejan cuts a corner off by sawing through the dotted lines.
How many vertices, faces and edges does the small piece he cut off have?



VERTICES.....

FACES.....

EDGES.....

How many vertices, faces and edges does the big piece left have?

VERTICES.....

FACES.....

EDGES.....

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20 Dan is colouring in lined paper to make stripes across the page.
He colours first the 12th line red and then every **alternate** line up to and including the 18th line.

How many lines did he colour red?

ANSWER.....

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21 Armand is buying grass seed for his garden.

The lawn he wishes to make is this shape.

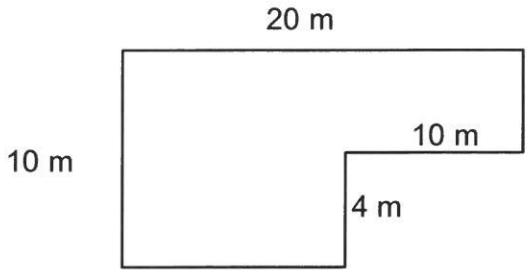


DIAGRAM NOT TO SCALE

Grass seed is sold by the bag. Each bag costs £10 and covers 3 m^2.

How much will it cost him?

ANSWER.....

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22 Rosie's plant doubles its height every day.

It is 4 cm tall on Monday. On what day does it become taller than two metres?

ANSWER.....

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23 Kitty's favourite Saturday night TV programme, *The Y Multiple*, was due to begin at 8:50 pm and it lasts 2 ¼ hours.
Last Saturday it started 13 minutes late.
What time did it finish?

ANSWER.....

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24 Ella noticed that the 5th October 2015 could be written 5 -10 -15, with all numbers being a multiple of 5.
When is the next date **from today (23rd January 2016)** which when written in this form also has all the numbers being a multiple of 5?

ANSWER.....

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25 Jonathan thinks of a whole number, multiplies it by itself and adds 9. He says that the answer is 47.
Daisy thinks Jonathan has made a mistake. Do you agree? Explain your reasoning.

ANSWER.....

REASON.....

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26 In a Latin test, Suril got 6 times as many marks as Krishan.
Ashwini has twice as many as Krishan.
Ashwini got 30 marks. How many marks did Suril get?

ANSWER.....

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27 Find the 30th term of this sequence.

6, 10, 14, 18,.....

ANSWER.....

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28 Krishani draws a rectangle with area 12 cm^2 and its sides are whole number lengths. Its perimeter is 14cm. How long is the **longest** side?

ANSWER.....cm

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29 Morosé's team have lost 3 times as many matches as they have won.
They have not drawn any matches.
They have played 24 matches.
How many have they won?

ANSWER .....

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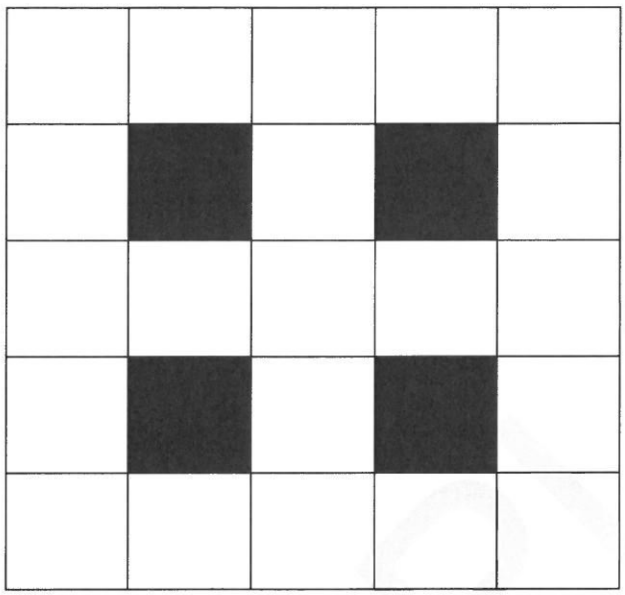
30 4 oranges and 7 apples weigh 51 ounces
7 oranges and 4 apples weigh 48 ounces

What do 1 orange and 1 apple weigh?

ANSWER.....ounces

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31 This 5 by 5 square is made up of a row of white squares, then a row of white and black squares, then a row of white squares and so on.
There are 4 black squares.
How many black squares would there be in a 7 by 7 square coloured in the same way?



ANSWER.....

32 Isaac cycles for 20 minutes at 18 km/hr and for 10 minutes at 6 km/hr.
How far has he cycled and what is his average speed?

Distance.....km

Average speed.....km/hr

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33 The triangle numbers are 1, 3, 6, 10, 15,...

They are formed like this:

1
1+2 = **3**
1+2+3 = **6**
1+2+3+4 = **10**
1+2+3+4+5 = **15**

(a) What are the next two triangle numbers?

ANSWER.....and.....

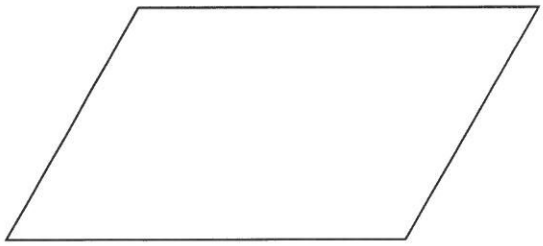
(b) The 200th triangle number is 10100. What is the 201st triangle number?

ANSWER.....

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34 Theo has a parallelogram and with one straight cut makes two pieces which he puts together to make a rectangle.

Show a cut he could make to do this on the diagram. In the space below show how the two pieces can then fit together to make a rectangle.



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35 It takes 4 builders 10 hours to build a wall.

How many hours would it have taken 5 builders to build the same wall?

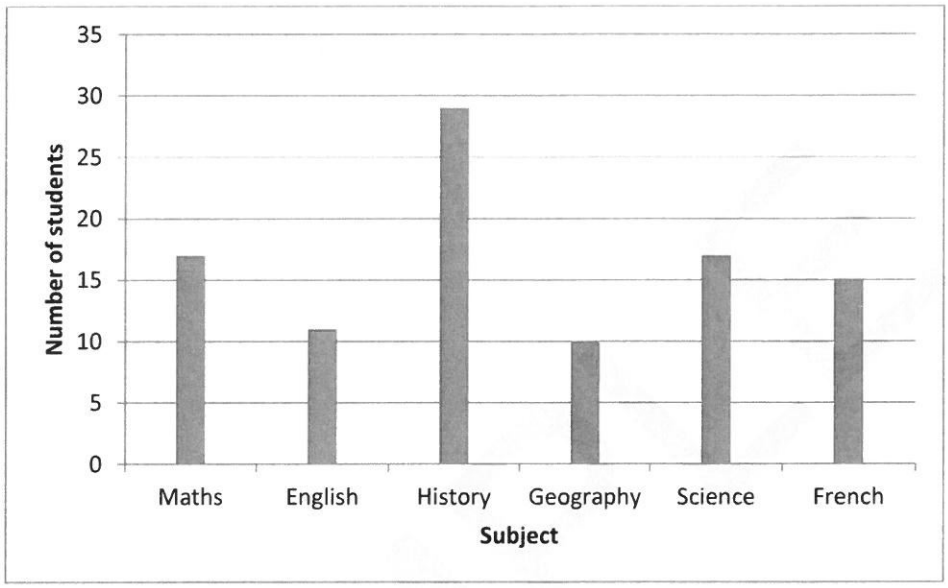
ANSWER.....hours

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36. This bar chart shows the results of a survey of students asked for their favourite subject.

Alex says "Most people prefer History"

Do you agree? Explain your answer.



ANSWER.....

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37 What is $\frac{1}{4}$ of 0.02?

ANSWER.....

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38 Chrystine's candle is 42cm tall and burns at a rate of 3cm every 30 minutes Kieran's candle is 30 cm tall and burns at a rate of 2cm every 40 minutes. They both light their candles at the same time.

How much longer does Kieran's candle take to burn completely down than Chrystine's candle?

ANSWER.....

After how many minutes were the candles the same height?

ANSWER.....

YOU HAVE NOW COMPLETED THE EXAMINATION.

IF YOU HAVE TIME GO BACK AND CHECK YOUR ANSWERS.