11 Plus Guru
Online Education Experts

Mathematics

Standard Format

For Sutton Schools

Practice Paper-4

Read the following instructions carefully:

1. You are not allowed to open or turn over this test paper unless told.
2. This paper is a standard format paper containing different types of questions.
3. You are NOT allowed to use calculators.
4. The answers should be written in the question paper itself in the space provided.
5. Work out the questions carefully and quickly. If you are unable to do a question, go on to the next question, do not waste time on it.
6. The test contains **26** questions, and you will have **45** minutes to finish the test.
7. The maximum marks awarded for this paper is 100. Marks for each question are shown in brackets ( ).

1) Work out

101×99

_9999_____ (3 marks)

2) Work out

$2\frac{5}{7} \div 1\frac{2}{9}$

___$2\frac{17}{77}$____ (3 marks)

3) Find 0.5% of 300

____1.5____ (3 marks)

4) Circle the even numbers below given that n is positive and is a non-zero whole number.

2n, 2n-1, 4n

2n and 4n__ (3 marks)

5) Work out the following.

a. Round 3.499 to one decimal place.

__3.5_____ (1 mark)

b. Round 3040 to one significant figure.

__3000_____ (1 mark)

c. Estimate $\frac{9.8+45.56\times9.956}{1.99}$

_230 to 250__ (1 mark)

6) Express $\frac{625}{400}$ in its simplest form.

__$1\frac{9}{16}$_____ (3 marks)

7) Simplify the expression below.

a. $6x - 19 + 15x + 23$

$21x + 4$ (2 marks)

b. $-5a - 7A + 15a + 2$

$10a - 7A + 2$ (2 marks)

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8) Ray and Charles shared £84 in the ratio 5:7.

How much more money did Charles get?

14 (3 marks)

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9) The charges for using the swimming pool at a resort are given in the table below.

Pool accessories (inflatable tube, hammock pool float and goggles)	£5.50
For 1st hour	£8.00
For every additional 20 minutes	£0.90

Megan rented the pool accessories and paid a total of £17.10. How long can he use the swimming pool?

140 Minutes (4 marks)

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10) Look at the function machines below in which either the input or the output is missing. Fill each function machine correctly with the appropriate answer.

a) 8 → x 50% → x 50% → ?

_____2____ (2 marks)

b) ? → x 25% → x 50% → 5

_____40__ (2 marks)

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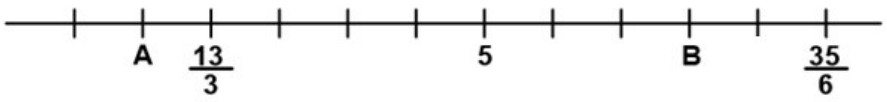
11) Find the missing values of A and B on the number line below.



A =$4\frac{1}{6}$__and B =$= 5\frac{1}{2}$____ (4 marks)

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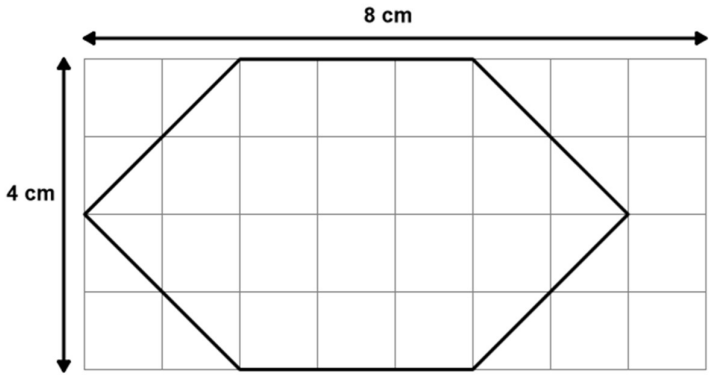
12) Look at the hexagon below. Each square in the grid is identical.



(Diagram not to scale)

What is the area of the hexagon given above?

__20 cm^3___ (4 marks)

13) One Roman numeral is missing from each of the Roman numeral expressions given below.

Using the letters below, fill in the missing Roman numerals.

X	C	X	I	M

a. M☐MDCLXXVII ___M____ (1 mark)

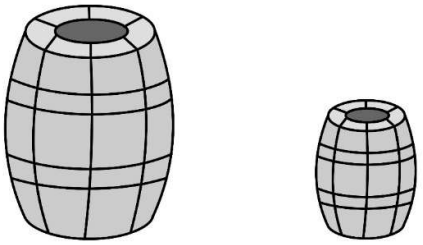
b. XXVI☐ ____I____ (1 mark)

c. MDCCC☐LV ____X____ (1 mark)

d. MMM☐DLVII ____C____ (1 mark)

e. MDCLX☐VIII _____X___ (1 mark)

14) Look at the two barrels below.



Barrel 1 Barrel 2

The ratio of the capacity of barrel 1 to the capacity of barrel 2 is 6:1. The difference between their capacities is 22.5 galleons.

What is the capacity of barrel 1?

27 galleons (4 marks)

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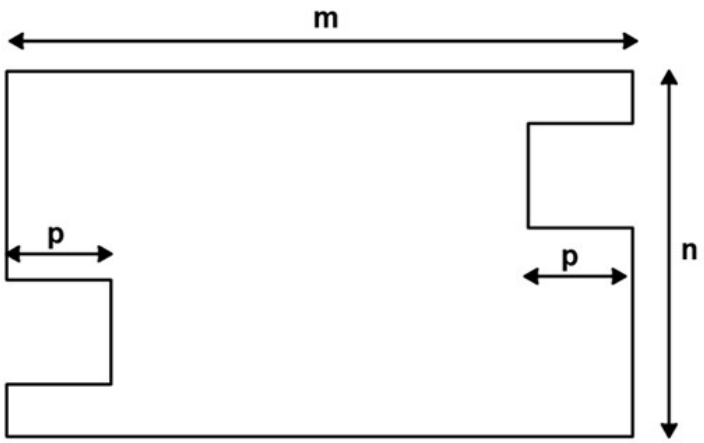
15) Look at the rectangle below with sides m and n from which two identical squares are cut out.



(Diagram not to scale)

Find the perimeter of the shape above in terms of m, n and p.

_2m+2n+4p_ (4 marks)

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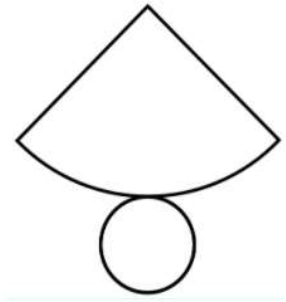
16) What 3D shape will be formed by the net below?



_Cone____ (3 marks)

17) Jim saved £1.00 every day in order to buy 5 books that cost £4.50 each.

How many days did it take him to save enough money to buy all five books?

___23 days_ (4 marks)

18) The table below contains some properties of quadrilaterals A, B and C.

Property	**A**	**B**	**C**
Diagonals intersect at 90°	Yes	Yes	Yes
Diagonals are equal	Yes	No	No
All angles are equal	Yes	No	No
All sides are equal	Yes	Yes	No

a. Identify the name of each quadrilateral using the table above.

A= Square (1 mark)

B = Rhombus (1 mark)

C = Kite/trapezium (1 mark)

b. Write one another property of quadrilateral A and B which is not present in quadrilateral C.

Opposite sides are parallel (1 mark)

19) A mobile phone company has a monthly fee of £30.00 which includes 500 minutes of free calls and 4 GB of free data. Additional calls cost 2 pence per minute and additional data costs 4 pence per MB. Timmy's total bill for January is £42.00.

How many minutes does he talk in January if he does not use any extra data?

1100 minutes (4 marks)

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20) The table below shows the distance, in miles, between four different cities.

London			
415	**Glasgow**		
120	370	**Bristol**	
60	380	75	**Oxford**

a. How many miles does Pat cover if he travels from Glasgow to Oxford and then to London?

__440 miles_ (2 marks)

b. How many miles does he cover if he travels from Bristol to London and then to Oxford?

__180 miles_ (2 marks)

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21) A walrus show is organised at a zoo all days of the week. On weekdays, 92 people watched the show every day. During the weekend, 120 people watched the show every day.

How many people watched the show on average each day?

____100___ (4 marks)

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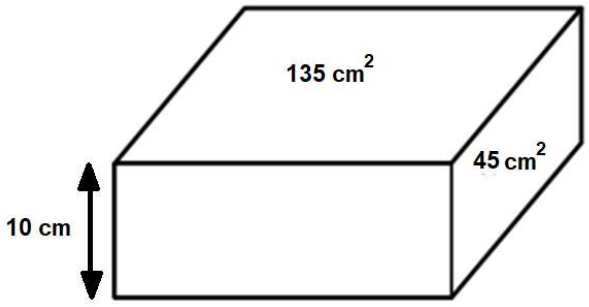
22) Look at the cuboid below. The height of the cuboid is 10 cm. The area of two faces of the cuboid are 135 cm^2 and 45 cm^2 as shown below.



(Diagram not to scale)

a. What are the dimensions of the cuboid?

4.5 cm x 30cmx10 cm (2 marks)

b. What is the total surface area of the cuboid?

__960 cm^2_ (2 marks)

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23) A nanometer is $\frac{1}{1,000,000,000}$ of a metre. The diameter of a bacterium is 0.0003000002 metres.

What is the diameter of the bacterium in nanometers?

300000.2 nm__ (4 marks)

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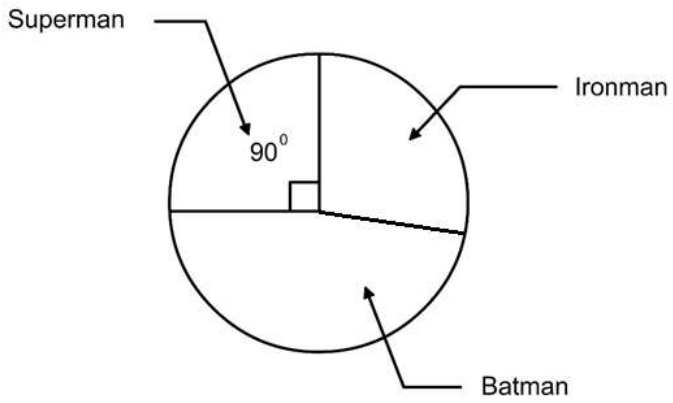
24) A survey was conducted among children to find out their favourite superhero. The results are given in the pie chart below.



(Diagram not to scale)

a. What is the fraction of children that like Superman?

_____$\frac{1}{4}$_____ (2 marks)

b. If the number of children who like Batman is 70% more than the number of children who like Ironman, find the angle representing children whose favourite superhero is Batman.

____170°__ (2 marks)

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25) The total price of buying a science book, maths book and English book is £55. The maths book costs £3 more than the science book and the English book costs £2 less than the maths book.

a. Find the cost of the maths book.

___£20_____ (2 marks)

b. The bookseller gives a discount of £2 on the science book, £2 on the maths book and £4 on the English book. What is the new total cost of the books?

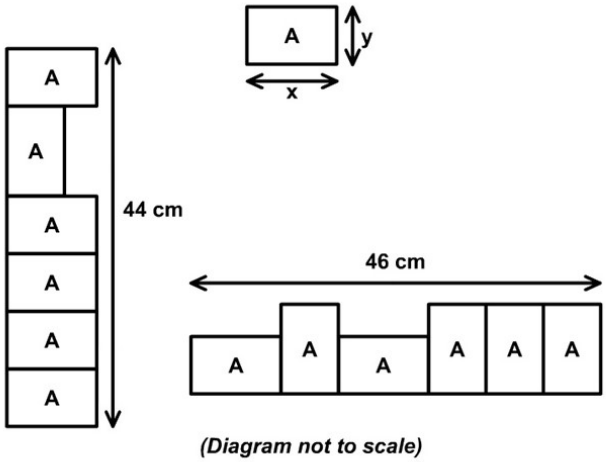
_____£47__ (1 mark)

c. Abraham bought 2 copies of the science book at the discounted price and sold them to his friend Eugene at a profit of 10%. What was the selling price of one science book?

____£16.50_ (2 marks)

26) Rectangles A and B are placed together to form various shapes.

a. Twelve rectangles A's are placed together vertically and horizontally to form the two figures shown below.

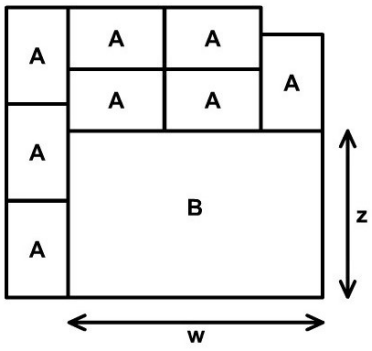


(Diagram not to scale)

Calculate the values of x and y.

$x = 9\ cm\ and\ y = 7cm$ (3 marks)

b. Eight rectangle A's and one rectangle B are placed together as shown below.



(Diagram not to scale)

Calculate the values of w and z.

$w = 25\ cm\ and\ z = 13cm$ (3 marks)