

11+ Maths Paper 1:

General advice and instructions before starting paper:

- Work quickly and accurately.
- Show all working.
- Attempt all questions.
- No calculators allowed.
- Time allowed: 1hr 30mins.

1) Solve the following;

- a. $256 \times 352 =$
- b. $2.8 \times 4.5 =$
- c. $8152 / 4 =$
- d. $\frac{1}{4}$ of $256 =$
- e. $\frac{3}{5}$ of $225 =$

[5]

2) If; $2y + 6 = 8$ find y

[2]

3) There are 88 cars in a school car park. The ratio of Blue: Red: Black: White is 3:1:2:2. Work out the total number of cars which are;

- a. White
- b. Not Blue
- c. Red

[3]

4) Work out the following as percentages;

- a. $14/25$
- b. $16/20$
- c. $54/60$
- d. $30/40$
- e. $2/5$
- f. $72/80$
- g. $3/8$

[7]

5) The price of a car has dropped by 40% from £5600. Work out its new value? [2]

6) The value of a house increased by 5% to £750,000. What was its value before? [2]

7) John normally leaves home at 8.20am and walks to the tube station which is 17 mins away. His journey on the tube is normally 25 minutes but because of significant delays, the train is

running 35 minutes late. John normally walks from the tube station to his workplace which takes 12 minutes. What time does John arrive at work? [2]

- 8) Three shops have the following displays:

Shop 1: 'Buy 3 apples for the price of 2'.

Shop 2: 'Buy one apple, get one free'.

Shop 3: 'Buy half a dozen apples and get a 50% discount on the total price'

Ann wants to buy 9 apples. Which will be the cheapest deal? [3]

- 9) Work out;

a) $54 \div 9 + 5 - 4 \times 2$

b) $3^2 \times 4^2$

c) The highest common factor of 64 and 72 [3]

- 10) What are the prime factors of 225? [2]

- 11) What is the product of the 5th and 7th prime numbers? [2]

- 12) The table below shows currency conversion rates;

£1 = \$1.50

£1 = 90 Indian Rupees

£1 = 135 Kenyan Shillings (KSH)

- a) George wants to convert \$300 into UK £. How many £ does George get? [2]

- b) Kate is going to Kenya and wants £50 converted to KSH. How many KSH will she get? [2]

- c) Fiona wants to convert 1800 Indian Rupees into KSH. How many KSH will she get? [2]

- 13) Find the next 3 numbers in each sequence;

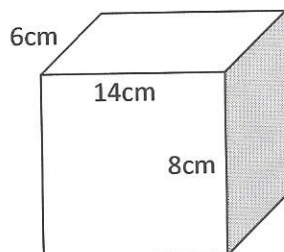
a. 3, 9, 27,,,

b. -2, 4, -8, 16,,,

c. 1, 3, 6, 10,,,

[3]

- 14) a) What is the volume and total surface area of the cereal box below? [3]



b) What is the maximum number of 0.5 litre bottles which can fit in such a cereal box? [2]

c) What is the perimeter of the above shape? [1]

15) Solve for y;

a. $2y - 6 = y + 15$

b. $3y - 2 = y + 12$

c. $\frac{1}{2}y + 10 = 30$

d. $4y = 30 - y$

e. $10y + 8 = 16 + 2y$

[10]

16) A bag contain 10 coloured balls of which 3 are red, 5 are green and 2 are blue. When a ball is picked from the bag, it is **not** replaced. Work out the probability of picking;

a. 2 green balls [2]

b. 2 balls with a different colour [2]

c. One red and one green ball [2]

17) Find the solution to the following ;

a. $\frac{5}{8} + \frac{3}{7} =$

b. $\frac{7}{9} - \frac{5}{8} =$

c. $\frac{3}{8} \div \frac{5}{6} =$

[3]

18) Convert the following mixed fractions into improper fractions;

a) $3\frac{2}{3} =$

b) $8\frac{4}{7} =$

c) $9\frac{2}{3} =$

[3]

19) Convert the following improper fractions into mixed fractions;

a) $\frac{26}{7} =$

b) $\frac{36}{5} =$

c) $\frac{47}{7} =$

[3]

20) Find the solutions to the following metric conversions:

a. 250cm to metres

b. 250g in kg

c. 2.5 litres in cm^3

d. 3m^3 into cm^3

e. 0.05cm in decimetres

f. 500ml in litres

[6]

- 21) A garden fence needs to be painted on both sides. Given that it measures 1.8m in length and 1.2m in height and that the paint tins are sold in 0.75L each, work out the total cost for painting the fence if each paint tin costs £4.60? [3]
- 22) For the following set of numbers,
12, 8, 11, 8, 6, 5, 11, 11

Work out the:

- a) Mean
- b) Median
- c) Mode
- d) Range

[4]

- 23) Two coordinates of a square are given as (6,1) and (1,1). Given that the area of the square is 25cm^2 find the 2 other coordinates of the square? [2]
- 24) Arrange the items below in ascending order;
 $\frac{3}{8}$, 0.35, 36%, $\frac{340}{1000}$, $\frac{6}{7}$, 0.42

[2]

- 25) How many lines of symmetry are found in each of the following regular shapes:
- a. Kite
 - b. Parallelogram
 - c. Octagon
 - d. Triangle

[4]

- 26) Work out the size of the interior angles in each of the following shapes:
- a. Pentagon
 - b. Octagon

[2]

- 27) Work out the size of the exterior angles in each of the following shapes:
- a. Pentagon
 - b. Hexagon

[2]

- 28) If Sam's mother Samantha will be four times his age in two years' time and given that Sam is currently 3 years younger than his sister Anna who is 11 years old, work out Samantha's age at present?

[2]

END OF TEST

TOTAL: 100 MARKS

Mark: /100

Comments:

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