11+ YEAR 5

MATHS TEST

40 Minutes

This paper contains 40 <u>questions</u>

First Name: _____

Last Name: _____

Date of Birth: __ __ / __ __/ __ __ __ __

a. This paper consists of a 40-minute test.

b. Read the instructions carefully.

c. Do not begin the test or open the booklet until told to do so.

d. Work as quickly and as carefully as you can.

40 Minutes

MATHEMATICS TEST

1. Simplify the ratio 16:80 into its simplest form.

   ………………………………..

2. Simplify the ratio 4:20:60:80 into its simplest form.

   ………………………………..

3. (32 x 46) – 52 = 1420
   Using the statement above, are the equations below true or false?

   a. (32 x 46) = 1470

   ………………………………..

   b. (32 x 46) – 1420 = 52

   ………………………………..

4. (97 x 15) + 42 = 1497
   Using the statement above, are the equations below true or false?

   a. (97 x 15) – 1497 = 43

   ………………………………..

   b. (97 x 42) + 15 = 1497

   ………………………………..

For the numbers 13, 47, 24, 166, 24, find the:

5. Range

   ………………………………..

6. Mode

   ………………………………..

7. Median

   ………………………………..

8. Mean

   ………………………………..

9. Distribute 66 into the ratio 1:2:3

   ………………………………..

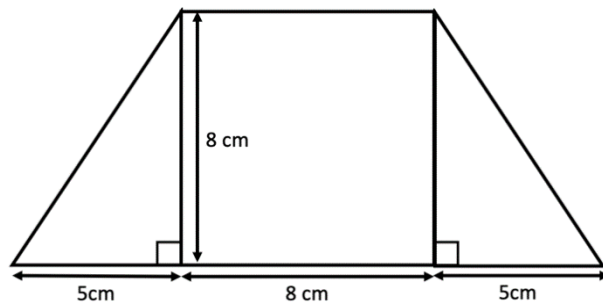10. Distribute 72 into the ratio 1:3:5

   ………………………………..

For questions 11 and 12, it is highly unadvised to calculate the whole number.

11. 2947 x 81639 is a large number. What is the final digit of this number?   …………………………….

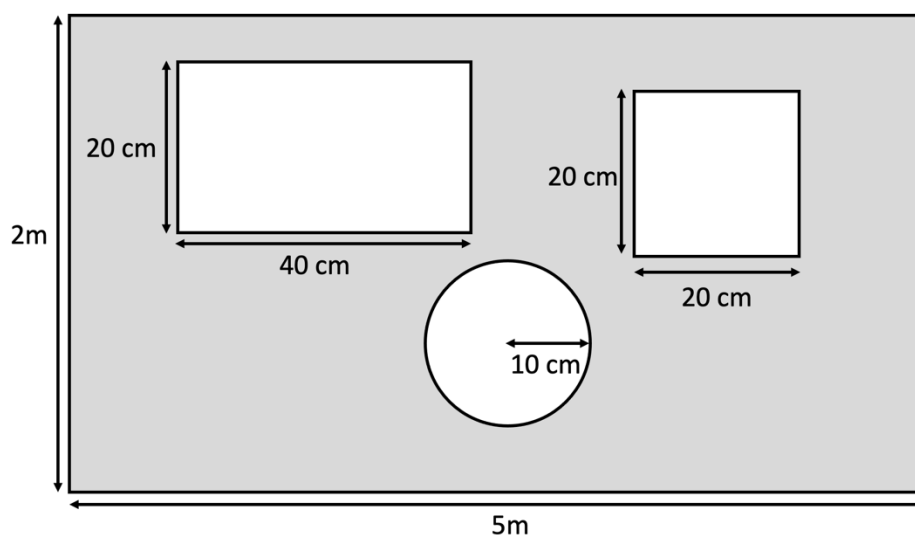**12.** 92835 x 719482 is a large number. What are the final two digits of this number?

…………………………………..

13. What is the total area of this shape?

5cm	8 cm	5cm

…………………………………..

14. A garden is 6m by 8m. If a fence costs £12 per metre to install, what is the cost of installing a fence around the garden?

…………………………………..

15. A wall is 20m long and 3m high. One painter can paint 2 square metres in 10 minutes. How many painters are needed to paint the entire wall in an hour?

…………………………………..

16. Christian is planning to paint his wall which measures 2 **metres** by 5 **metres**. He wants to put up three picture frames (one rectangle, one circle and one square) and will not need to paint behind them. What is the surface area that he needs to paint? (You may give your answer in centimetres squared.) Take π to be 3.14

....

17. Calculate the value of the following
   a. 14^3

....

   b. $\sqrt{144}$ ....

18. A packet of M&Ms contains red, blue, yellow and green M&Ms in the ratio 4:3:5:2.

   a. What fraction of the M&Ms are blue?

....

   b. If there are 15 yellow M&Ms, how many green M&Ms are there?

....

   c. If there are 15 yellow M&Ms, how many M&Ms are there in total?

....

19. The cost of zoo tickets is given below.

Adult	£7.50
Child	£4.50
Family (2 adults, 2 children)	£18.00

a. Calculate the total cost for 2 adults and 1 child.

……………………………….

b. How much would a family of 2 adults and 2 children save by buying the family deal instead of individual tickets?

……………………………….

20. Find 35% of 950.

……………………………….

21. The scale of a map is 1cm:15km. if the distance between London and Germany is 58cm, what is the actual distance between them?

……………………………….

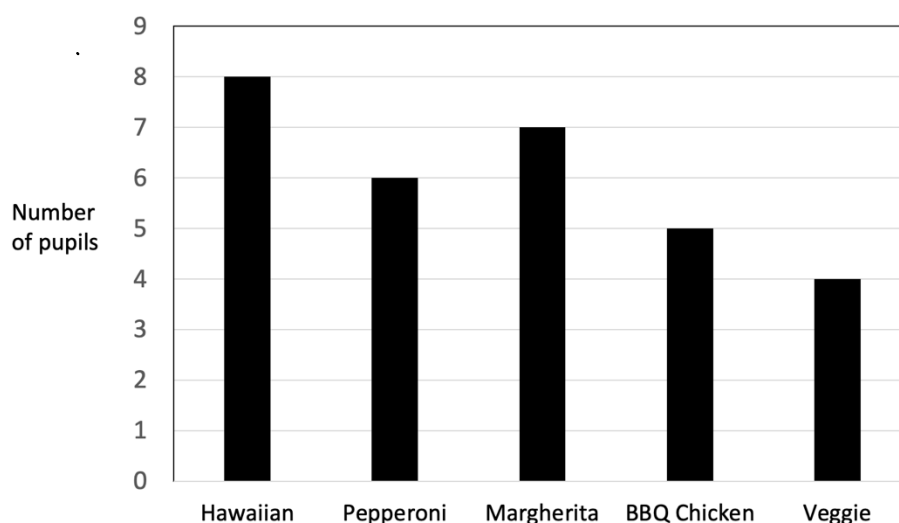**22.** Abigail has 20 ribbons of different lengths. What is the modal length?

Length in cm	Frequency
2	2
3	2
4	4
5	3
6	3
7	6

……………………………….

23. Theo received the following marks in English tests: 78, 92, 94, and 88. What mark must he receive in his 5th test to have a mean score of 90?

……………………………….

24. The graph below shows some pupils' favourite flavours of pizza.

a. What is the modal flavour? ………………………………….

b. What fraction of pupils have BBQ Chicken as their favourite flavour? ………………………………

25. Cameron runs one lap around the track in 4 minutes. Kimberley runs one lap around the track in 3 minutes. If they both start running at 12:35, when will they next be at the start of the lap at the same time?

………………………………….

26. 625 grams of flour are needed to make 5 cakes. Charlotte wants to make 16 cakes and has 1.25kg of flour. How much more flour (in grams) does she need to buy?

………………………………….

27. Lara, Tracey and Ron win $600 to share between them. They want to divide the money in the ratio 4:5:1. How much money does Lara receive?

………………………………….

28. A drink store sold coffee, tea and hot chocolate in a ratio of 10:8:7. If the store sold 35 cups of hot chocolate that day, how many more cups of coffee than tea did it sell?

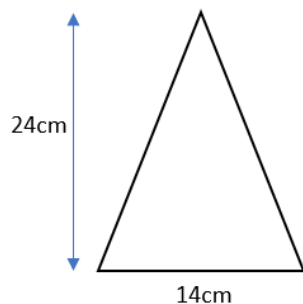………………………………….

29. If it takes one dishwasher to wash 50 plates in 5 minutes, how many minutes would it take 4 dishwashers to wash 300 plates?

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30. The range of prices of cakes at a bakery is £19.25. If the lowest-priced cake is £24.50, what is the price of the most expensive cake?

....

31. The plan view of a slice of red velvet cake is shown below. Phoebe wants to decorate the top of the cake with gold leaf. Gold leaf costs £22 for every 3cm^2 that it covers. How much will it cost to cover the top of the cake slice with gold leaf?

24cm

14cm

....

32. Work out $4\frac{3}{8} \div 7$

....

33. If it takes one maths teacher 18 hours to write 40 maths questions for a test, how many hours would it take two maths teachers together to write 340 maths questions?

....

34. Kenny can eat 48 chocolates in one and a half hours. How many whole chocolates could he eat in 18 minutes?

....

35. 1:Y is the scale ratio of a map that has a 340 mile long road represented by a 20 centimetre long line. What is the value of Y in miles?

....

36. Bea makes 6 candles with an average weight of 426g. The first 5 candles weigh 452g, 299g, 433g, 462g and 421g. How much does the sixth candle weigh in grams?

……………………………..

37. Bea scents her candles with a special blend of smells. She uses three different liquids: lavender oil, vanilla oil and chamomile essence in a ratio of 5:4:2. If she uses 368ml of vanilla oil, what is the total amount of these liquids she uses in millilitres?

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38. Luxury woven blankets made from unicorn hair are very expensive, but if you pay by **cash** you can get a 20% discount! Connor pays for a blanket by **card**, which cost him £22,840. How much would he have saved if he paid in cash?

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Questions 39 and 40 are based on the following information: Blackbeard the pirate, his mate Jim and Carlos the sailor, find a treasure trove worth £580,000. Blackbeard is greedy and fearsome so the money is split in the ratio 13:1:2 (Blackbeard: Jim: Carlos).

39. Blackbeard suddenly has a change of heart and decides to give 40% of his money to charity to make up for all the terrible things he has done. Jim chooses to give 0.2 of his share to the same charity, and Carlos kindly gives up seventeen twenty-fifths of his money to the charity. How much do they donate to charity altogether?

……………………………..

40. What is the amount of money Jim donated as a fraction of the total amount they found in its simplest form?

$$\underline{1}$$

……………………………..

END OF TEST

Year 5 Math Test

1	1:5
2	1:5:15:20
3a	FALSE
b	TRUE
4a	FALSE
b	FALSE
5	153
6	24
7	24
8	54.8
9	11:22:33
10	08:24:40
11	3
12	70
13	104cm2
14	£336
15	5
16	98486 cm2
17a	2744
b	12
18a	3/14
b	6
c	42
19a	£19.50
b	£6
20	332.5
21	870km
22	7cm
23	98
24a	Hawaiian
b	1/6
25	12:47
26	750g
27	£240
28	10
29	7.5 minutes
30	£43.75
31	£1,232
32	5//8
33	76.5h
34	9
35	17
36	489
37	1012
38	£4,568
39	£245,050
40	1//80