



Mathematics

Year 7

MARCH EXAMINATION 2021

1 hr. 30 min

Additional Materials:

- Soft clean eraser
- Soft pencil (type B or HB recommended)

Read these instructions first

This paper contains 20 questions. Answer all questions in the spaces provided.

Do **not** use staples, paper clips, and glue or correction fluid.

Any rough working should be done in the rough work booklet provided.

NAME:

DATE:

SCORE:

TOTAL MARKS:

[Turn over]

1. Some year 7 students were asked how many pets they have.

0,1,0,0,2,0,0,0,3,0,0,23,3,2,0,30

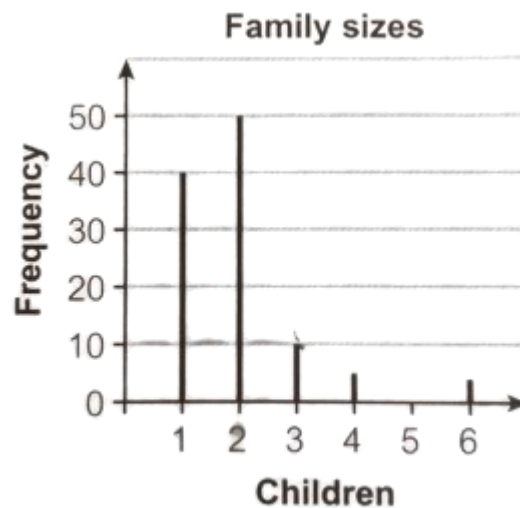
a) Write down the mode. (1 mks)

b) Work out the median. (2 mks)

c) Work out the mean. (3 mks)

d) Work out the range (2 mks)

2. The bar – line graph chart shows the numbers of children in the families of some year 7 students.



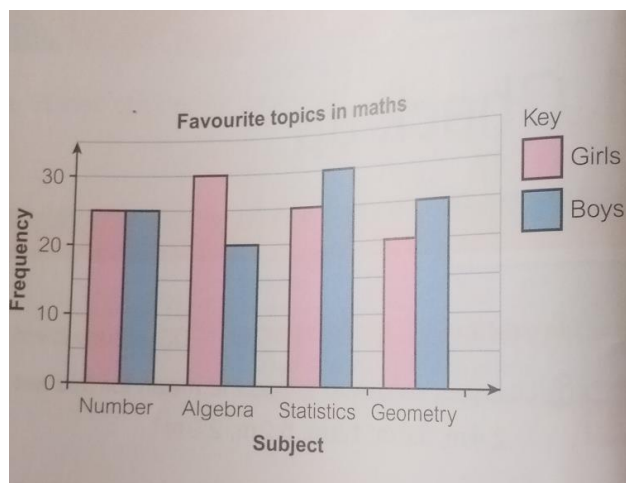
a) How many families have 3 children? (1 mk)

b) What is the mode? (2 mk)

c) Why is there no bar for 5 children? (2 mks)

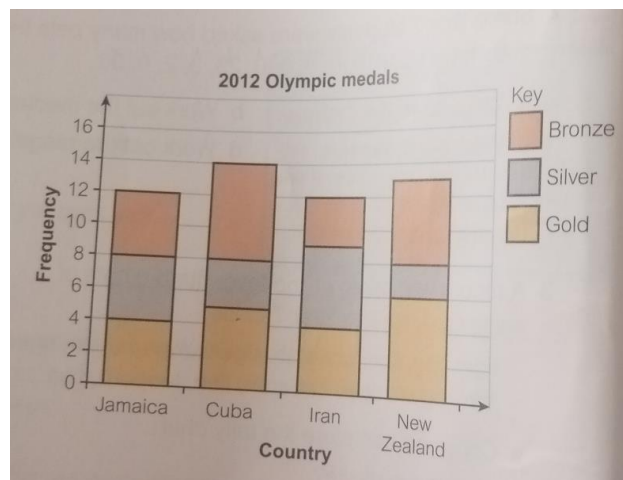
d) How many families have fewer than 3 children? (3 mks)

3. 100 girls and 100 boys were asked which topics in math they like most. The bar chart shows the result.



- a) Which was the boy's favorite topic? (1 mk)
- b) Which was the girls' favorite topic? (1 mk)
- c) Which topic did equal number of boys and girls like most. (2 mk)
- d) How many more boys than girls liked statistics most.(3 mks)
- e) How many students chose number as their favorite topic?

4. The bar chart shows the medals won by four countries at the 2012 Olympics



- a) How many gold medals did Cuba win? (1 mark)
- b) Which of these countries won the most bronze medals? (1 mark)
- c) Which of these countries won five silver models ? (2 marks)
- d) Which two of these countries won the same number of medals? (1 mark)
5. a) The numbers 4, 2, 7, _ have a mode of 2. What is the missing number? (1 mark)
- b) The numbers 20, 70, 10, _ have a range of 80. What's the missing number? (1 mark)
6. Round each number to the nearest 100. (4marks)
- a) 244
- b) 671

c) 105

d) 350

7. Copy and complete these. Write the correct sign of greater than or less than; (3 marks)

a) $3^{\circ}\text{C} \dots -1^{\circ}\text{C}$

b) $-5^{\circ}\text{C} \dots 2^{\circ}\text{C}$

c) $-4^{\circ}\text{C} \dots -6^{\circ}\text{C}$

8. Work out; (4marks)

a) $6 \times (2 + 7)$

b) $(18 - 9) \times 4$

9. Phillips spent £285 on a shopping trip. Joe spent £189 more than Phillips. How much did Joe spend? (3 marks)

10. Use short multiplication to work out;. (6 marks)

a) 154×3

b) 237×4

11. Work out ; (6 marks)

a)
$$\begin{array}{r} \underline{112} \\ 7 \times 2 \end{array}$$

b)
$$\begin{array}{r} \underline{108} \\ 3 \times 6 \end{array}$$

c)
$$\begin{array}{r} \underline{5^2 - 7} \\ 2^2 - 1 \end{array}$$

12. Which of these numbers are square numbers. (1mark)

123, 169, 101, 144, 230.

13. Find the lowest common multiple of each of the following sets of numbers; (6 marks)

a) 4, 6 and 9

b) 3, 4 and 5

14. Find the highest common factor of each of these sets of numbers; (6 marks)

a) 12, 18 and 36

b) 24, 32 and 40

15. Website A had 287 hits on Monday. On the same day, Website B had 34 times as many hits.

How many hits did website B have? (3 marks)

16. Simplify; (2 marks)

a) $21y \div 7$

b) $p \times q$

17. Multiply out the brackets; (2 marks)

a) $4(x + 4)$

b) $6(x - 2)$

18. Expand and simplify ; (3 marks)

$$3(5x + 2) + 2(x - 1)$$

19. Write expression for ; (4 marks)

a) 6 more than x

b) 5 less than x

c) x with 4 added on.

d) x less than 10

20. A formula used in science for a rough conversion from weight (W) to mass (M) is

$$M = W - 10$$

Work out the value of M when; (6marks)

a) $W = 60$

b) $W = 500$

c) $W = 85$