SECONDARY SCHOOLS ANNUAL EXAMINATIONS - 2000

Educational Assessment Unit - Education Division

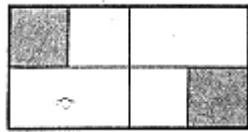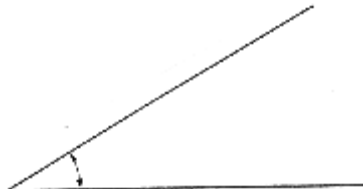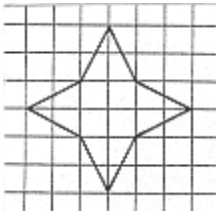**FORM 2**   **MATHEMATICS (MENTAL)**   **TIME: 15 minutes**
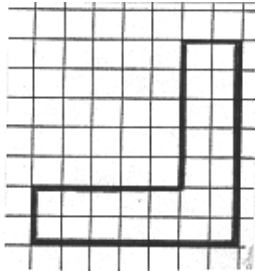
Name _____

Class _____

Mark

- **ANSWER ALL QUESTIONS.**
- **EACH QUESTION CARRIES 1 MARK.**
- **CALCULATORS, RULERS, PROTRACTORS AND OTHER MATHEMATICAL INSTRUMENTS ARE NOT ALLOWED.**
- **WRITE DOWN YOUR ANSWER ONLY IN THE SPACE PROVIDED.**

DO NOT WRITE IN THIS SPACE

QUESTION	ANSWER
1. What is the value of 3 in the number 5307?	
2. Write down the next number in the following pattern: 1, 3, 6, 10,	
3. Write down, in its simplest form, the fraction of the shape that is shaded.	
4. The size of the angle shown is: A) 45° B) 30° C) 10° D) 150°	
5. By counting the squares estimate the area of this four pointed star.	
6. Matthew earns Lm180 weekly and saves 10% of it. How much does he save in one week?	
7. How many minutes did the lesson last? Lesson begins Lesson ends	
8. $\dfrac{x}{2} = 6$. What is the value of x?	
9. Draw the line of symmetry of the given diagram.	
10. Place the correct symbol > , < or = between the following numbers: $\dfrac{4}{5}$ ☐ 0.8	

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FORM 2   **MATHEMATICS (Main Paper)**   **TIME: 1 h 45 min**

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Main	Mental	**Global Mark**
Mark																		

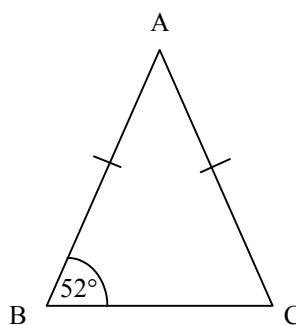## DO NOT WRITE ABOVE THIS LINE

Name _____   Class _____

1. In a class of 24 students there are 15 girls. Write down the number of boys as a fraction of the number of students in the class. Give your answer in its simplest form.

(4 marks)

2. Solve the equation $2a + 4 = 12$.

(4 marks)

3. Sides AB and AC in triangle ABC are equal. $\angle$ABC is equal to 52°. Find the size of $\angle$BAC.
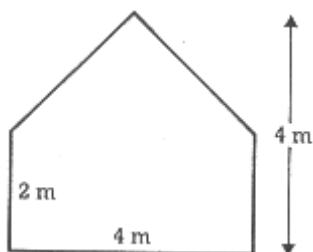

(4 marks)

4. Find 15% of 2.2 metres.
    Give the answer in centimetres.

(4 marks)

5. Seven pupils got the following marks on a test: 9, 6, 6, 5, 4, 7, 5.
    What is the mean mark?

(4 marks)
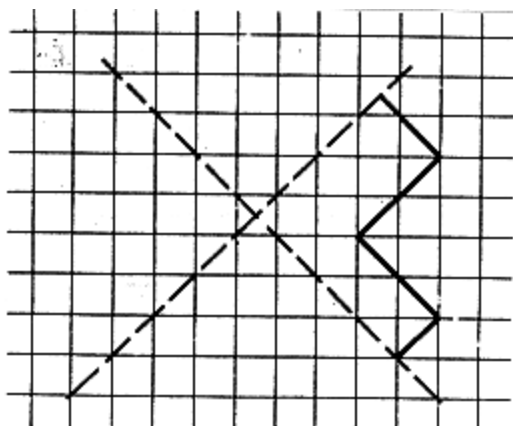
6. Calculate the area of the given shape.

(6 marks)

7. a) If $x = yz$, find x when   b)   If $a = 6c^2$, find a when $c = 3$.
        $y = 10$ and $z = 5$.

(6 marks)

8. If you throw an ordinary six-sided dice, what is the probability that you will **not** get a
    score of 5 or more?
    Give the answer as a fraction in its simplest form.

(6 marks)

9. Complete the given drawing so that the dotted lines are lines of symmetry.
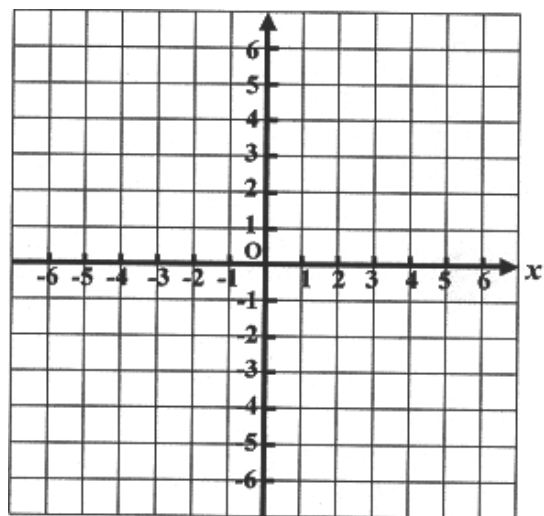

(6 marks)

10. 5 pairs of jeans of the same brand cost Lm41.25.

    (i) What is the cost of 1 pair of jeans of this brand?
    (ii) What is the cost of 4 pairs of such jeans?
    (iii) How many pairs of jeans of this brand can I buy if I have Lm50?

                                                                    (6 marks)

11. (i) Plot the following points:

        A = (−4, −2)
        B = (−1, 1)
        C = (2, 4)
        D = (3, 5)
        E = (4, 6)

    (ii) Join the 5 points.
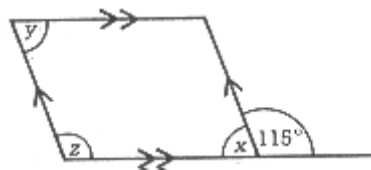
    (iii) Complete: ABCDE is a _____
                                                                    (8 marks)

12. (i) Write down the name of the quadrilateral shown in the figure.
        Give a reason.
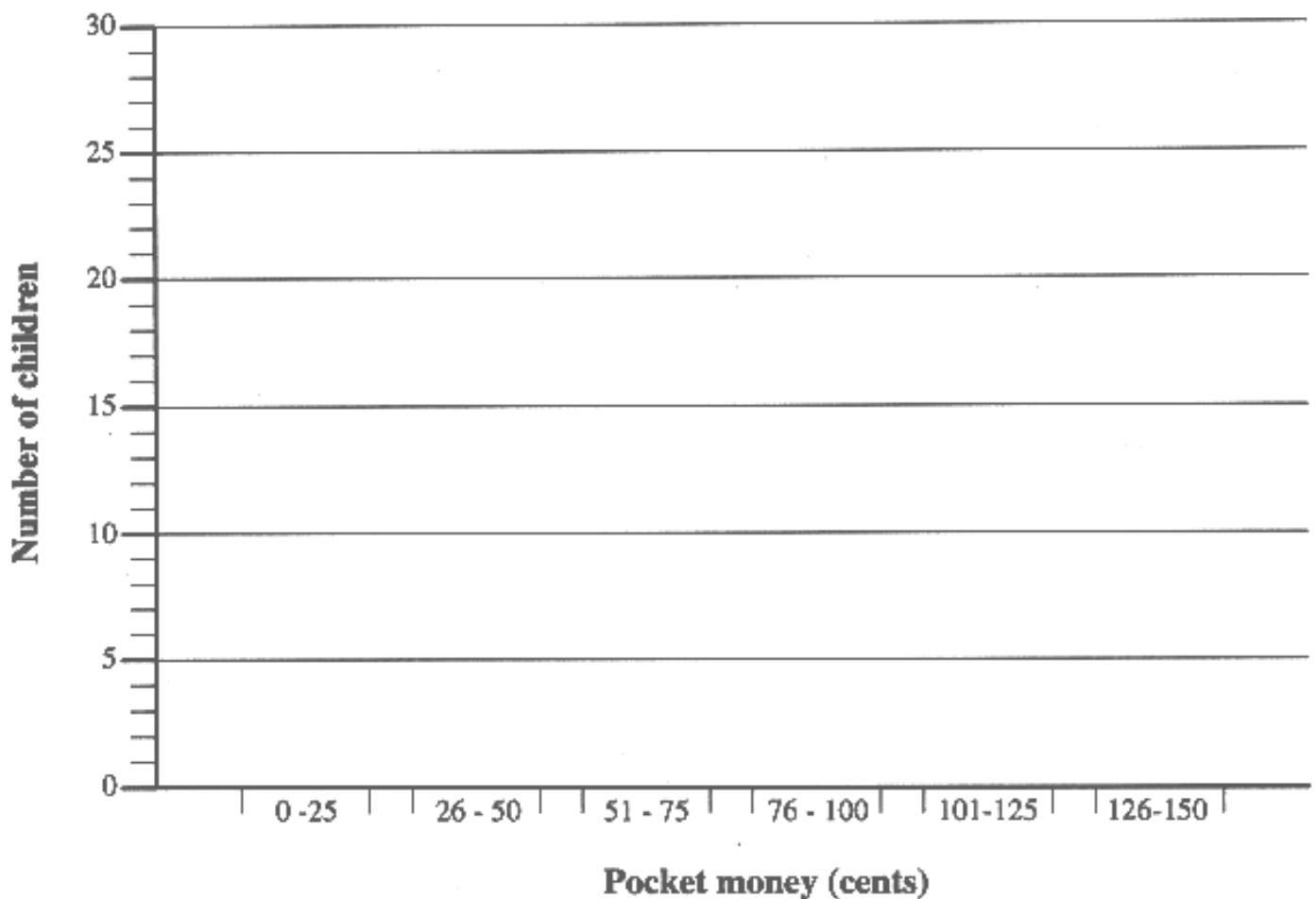
    (ii) Find the size of the angles marked x, y, and z. Give the reasons.

                                                                    (8 marks)

13. A group of 13 year olds were asked how much pocket money they were given each week. This frequency table was made from this information.

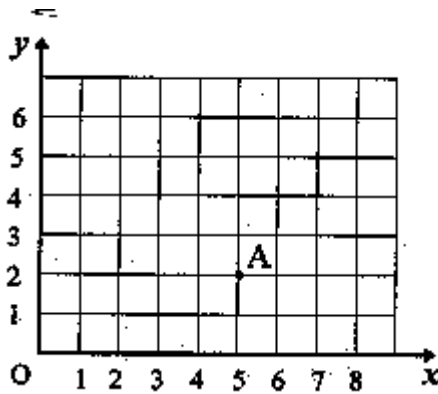| Weekly pocket money (cents)	0 - 25	26 - 50	51 - 75	76 - 100	101 - 125	126 - 150
Number of children	10	15	22	28	20	5

i) How many children were asked how much pocket money they received?
ii) How many children got 75c or less each week?
iii) Draw a bar chart to show the information in the above table.

(8 marks)

14. a) A round table has a diameter of 120cm. Find the circumference of the table in metres. Give your answer correct to 2 decimal places $[C = 2\pi r]$.

    b) A is the point (5, 2). Mark the point A' which is the translation described by the vector $\begin{pmatrix} -2 \\ 3 \end{pmatrix}$.

(8 marks)

15. A water tank in the shape of a cuboid has sides 2.3m, 1.8m and 1.2m.

    (i)   Calculate its volume in cubic centimetres.
    (ii) Find the capacity of the tank in litres if 1000cm^3 = 1 litre.
    (iii) How many litres of water are in the tank if it is ¼ full?

(8 marks)