

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2007

Educational Assessment Unit - Education Division

FORM 4

MATHEMATICS – Scheme D

TIME: 30 minutes

(NON-CALCULATOR PAPER)

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	TOTAL
Mark															

DO NOT WRITE ABOVE THIS LINE

Name: _____

Class: _____

INSTRUCTIONS TO CANDIDATES

- **Answer all questions.**
 - **This paper carries 20 marks.**
 - **Calculators and protractors are not allowed.**
-

QUESTIONS

1. Put the numbers in order, starting with the smallest.

2372

1784

2386

1990

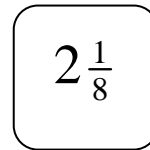
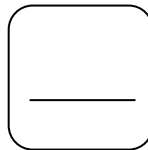
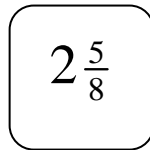
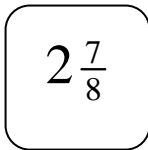
3233

3022

1784

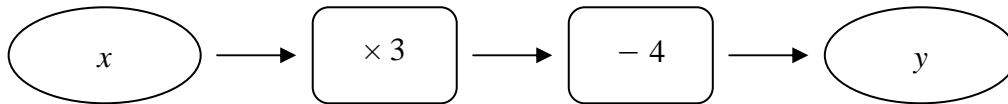
(3 marks)

2. Complete:



(1 mark)

3. This is a function machine.

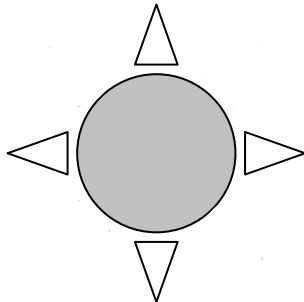


Complete:

When $x = 1$ then $y =$ _____

(1 mark)

4.



This shape has _____ lines of symmetry.

(2 marks)

5. Write this number in figures:

Eighteen thousand, six hundred and nine. _____

(1 mark)

6. Two boxes of Chocolate Biscuits cost Lm6.50.



Four of these boxes cost

Lm_____

(1 mark)

7.

15 20 19 1 5

(a) The range of this set of numbers is _____ .

(b) The mean of this set of numbers is _____ .

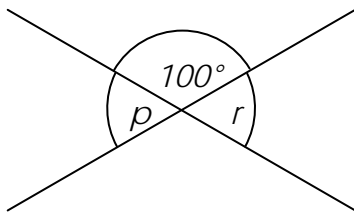
(2 marks)

8. A bus left Valletta at 10.30 a.m. The bus took **forty-five** minutes to arrive in Sliema. At what time did the bus arrive at Sliema?

The bus arrived at Sliema at _____ a.m.

(1 mark)

9.



Angle $p =$ _____ °

Angle $r =$ _____ °

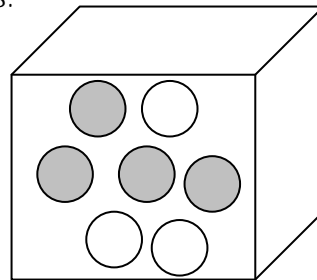
(2 marks)

10. In a box there are 4 grey balls and 3 white balls.

A white ball is taken out of the box.

What is the probability that the ball is white?

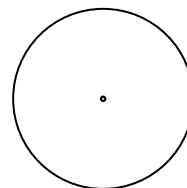
Probability (white ball) = $\frac{\square}{\square}$



(2 marks)

11. The radius of this circle is 3.25 cm.

The diameter of this circle is _____ cm.



(1 mark)

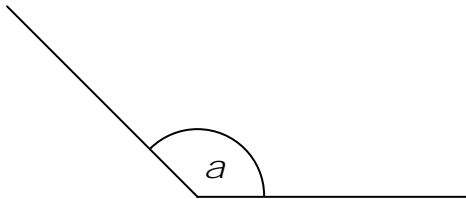
12. The square of five = 5^2 = 25

The cube of four = 4^3 = _____ .

(1 mark)

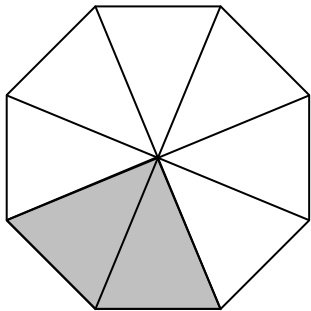
13. Angle a is about :

- (a) 40° (b) 100° (c) 140° (d) 200°



_____ (1 mark)

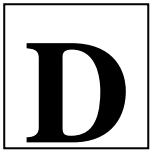
14. What percentage of this shape is shaded?



_____ %

(1 mark)

END OF PAPER



SECONDARY SCHOOL ANNUAL EXAMINATIONS 2007

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FORM 4

**MATHEMATICS – Scheme D
(MAIN PAPER)**

TIME: 1h 30min

Question	1	2	3	4	5	6	7	8	9	10	11	12	Total Main	Non- Calc	Global Mark
Mark															

DO NOT WRITE ABOVE THIS LINE

Name: _____

Class: _____

- Answer all questions.
- This paper carries 80 marks.
- Calculators and mathematical instruments are allowed but all necessary working must be shown.

1

23
4
27
6
64

Fill in the blanks. Use each number **only** once.

- (a) A multiple of 8 _____.
- (b) A square number _____.
- (c) The cube of 3 _____.
- (d) A prime number _____.
- (e) A factor of 12 _____.

(5 marks)

2 Mike wrote the number **1537.659**.

- (a) This number correct to the nearest 10 is = _____.
- (b) This number correct to two decimal places is = _____.
- (c) This number correct to the nearest whole number is = _____.
- (d) This number correct to the nearest 1000 is = _____.

(4 marks)

3 Work out:

(a) $5a + b - 2a + 6b$ = _____

(b) $4(p + 3)$ = _____

(c) When $g = 5$ and $h = 8$ then $2h - 3g$ = _____

(d) When $2m + 7 = 13$ then m = _____

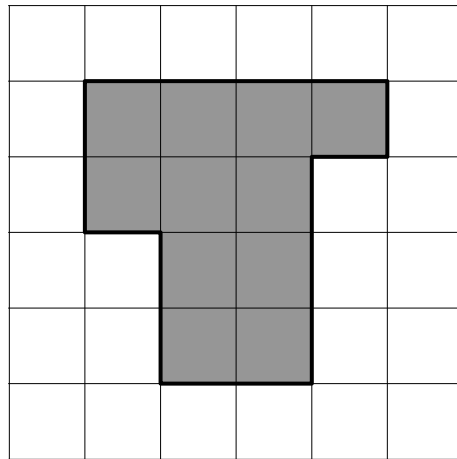
(6 marks)

4(a) On the grid, each side of a square represents 2 cm.

(i) Find the perimeter of this shape.

Perimeter = _____ cm

(ii) Find the area of this shape.

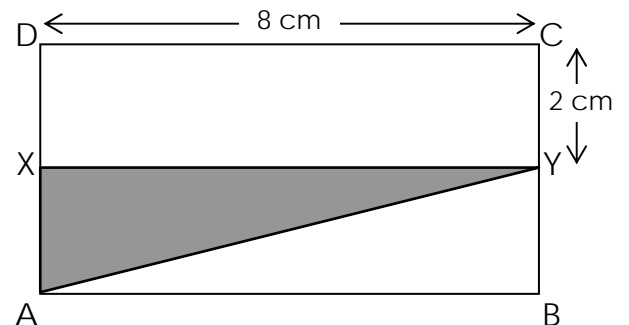


Area = _____ cm²

(b) **Rectangle** ABCD is 8 cm long and 4 cm wide.

(i) Find the area of rectangle ABCD.

Area of rectangle ABCD = _____ cm².



(ii) Find the area of **triangle** AXY.

Area of triangle AXY = _____ cm².

(8 marks)

D

5 These are **number cards**.

-4

-2

-7

-5

2

8

Fill in using the above number cards:

(a) + = 0

(b) ÷ = -2

(c) × = -14

(d) + = -7

(4 marks)

6 Lisa is using **LOGO**.
She types these commands.

PD

BK 100 FD 50 RT 90

FD 50 RT 90 FD 50



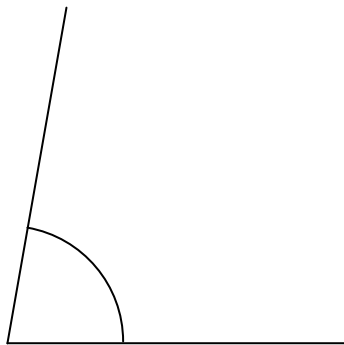
Draw the shape. **Start** from the turtle.

(4 marks)

- 7 Use ruler and compasses **only**.
(a) Draw an angle of 60° .



- (b) Bisect this angle.



- (c) Construct an equilateral triangle of side 6 cm. First draw a *rough* sketch.

(8 marks)

8 Mr Ellul receives this telephone bill.

MALTAPHONECOM			
Bill Details	from	to	Lm
21942376 Rent	01/10/06	31/12/06	<u>8.00</u>
Calls	217687	218047	_____
		VAT on rent	<u>1.44</u>
		VAT on calls	_____
		TOTAL	_____

(a) How many calls did he make between 01/10/06 and 31/12/06?

_____ calls

(b) Each call costs 5c. How much was the bill for the calls?

Lm _____

(c) VAT was charged at 18%. How much VAT was charged on the calls?

Lm _____

(d) How much was Mr Ellul's total bill?

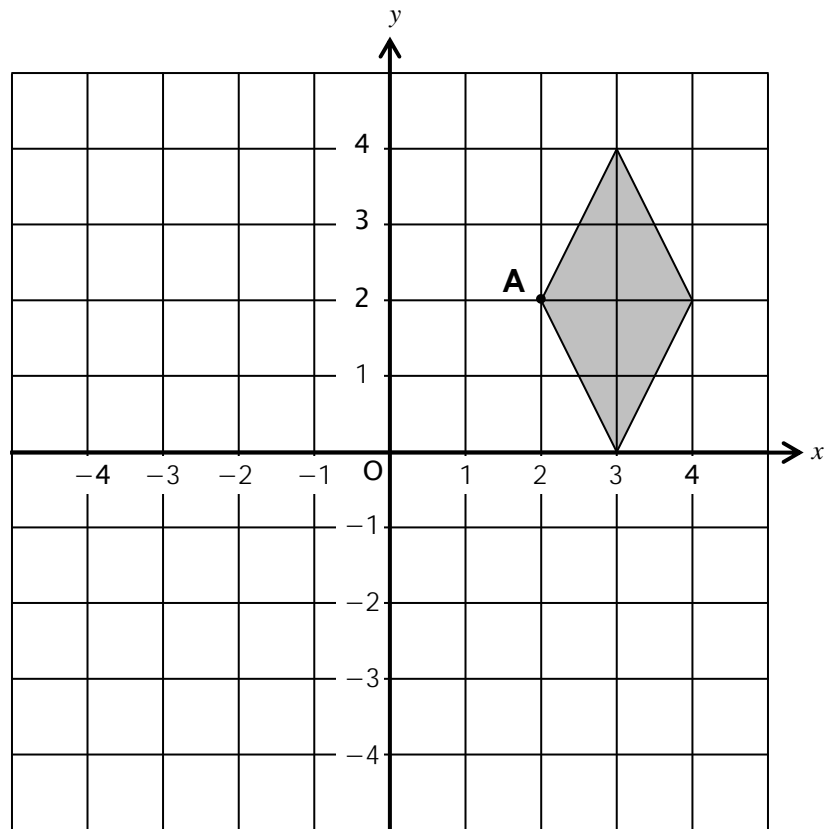
Lm _____

(8 marks)

9 A shape is drawn on the graph paper below.

(a) This shape is called a _____.

(square, rhombus, trapezium, rectangle)



(b) This shape has rotational symmetry of order _____. (1, 2, 3, 4)

(c) The **coordinates** of point **A** are (,).

(d) Draw the shape after a **translation** of 4 units left and 5 units down.

(e) The new **coordinates** of point **A** are (,).

(10 marks)

10 Helen and Paul are each carrying a bag.
 Helen's bag weighs $1\frac{3}{4}$ kg. Paul's bag weighs $\frac{3}{8}$ kg.

(a) What is the total mass of the two bags?

_____ kg.

(b) Helen's bag weighs _____ kg more than Paul's.

(c) There are twelve books in Helen's bag.

There are nine books in Paul's bag.

What is the ratio of the number of Helen's books to Paul's books?

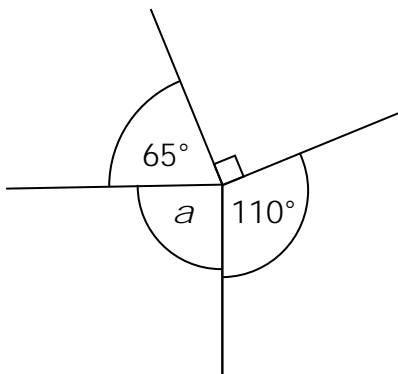
Write the answer in its simplest form.

_____ :

(6 marks)

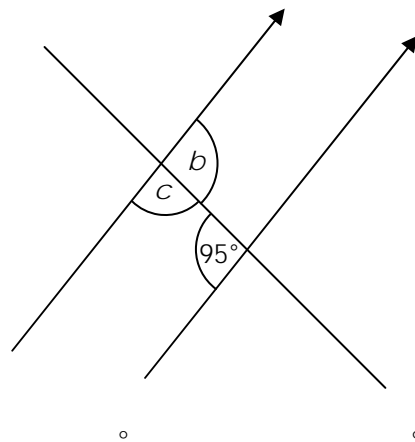
11 Find the size of each angle marked with a letter.

(a)



$a =$ _____

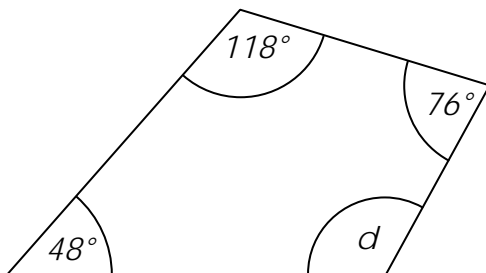
(b)



$b =$ _____

$c =$ _____

(c)



$d =$ _____

(9 marks)

12 (a) What is the **mode** of this set of girls' shoe sizes?

4 4 5½ 5 5½ 3
 3½ 5 3 4½ 3½ 5½

Modal shoe size is _____.

(b) What is the **median** of this set of boys' shoe sizes?

4 4½ 5½ 5 5½ 3
 3½ 5 3 4½ 3½ 5½

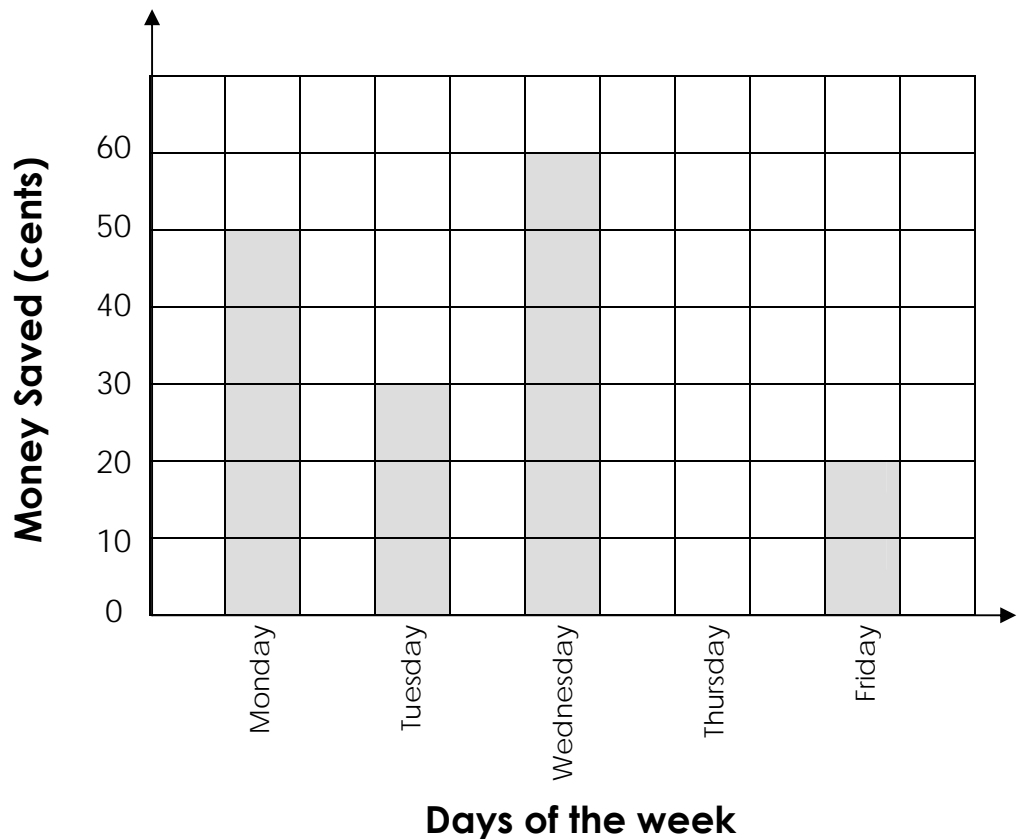
Median shoe size is _____.

(c) The bar chart shows the amount of money John saved during the week.

(i) How much money did he save on **Monday**?

_____ cents

(ii) John saved 40 cents on Thursday. **Draw** this amount on the bar chart.



(iii) What is the mean amount of money that John saved during the week?

_____ cents

(8 marks)

END OF PAPER