

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2008

Educational Assessment Unit – Education Division

D

FORM 5

MATHEMATICS Scheme D

TIME: 30 minutes

PAPER 1 (Non-Calculator)

Name: _____

Class: _____


Mark

INSTRUCTIONS TO CANDIDATES

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


1. Complete these cheques.

a)

BANK OF MALTA	
13, High Street, Blandun BLN1356.	Date: _____
Pay <u>Mary Borg</u>	<div>€253.00</div> 

_____ euro only.	
John Grima	
00235	123456789

b)

BANK OF MALTA	
13, High Street, Blandun BLN1356.	Date: _____
Pay <u>Joe Cassar</u>	<div>€ _____</div> 
<u>eighty-six euro and twenty-five cent</u>	
<u>only.</u>	
John Grima	
00236	123456789

(2 marks)

2. Give a rough estimate for: 49×52

_____ (1 mark)

3. 12, 13, 14, 15, 16, 17.

Use the numbers above and write one:

Prime Number: _____

Square Number: _____

Odd Number: _____

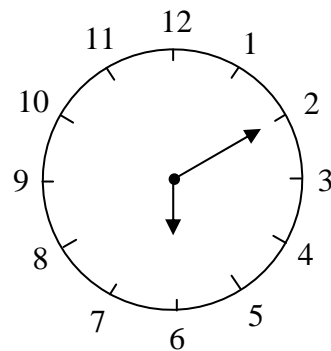
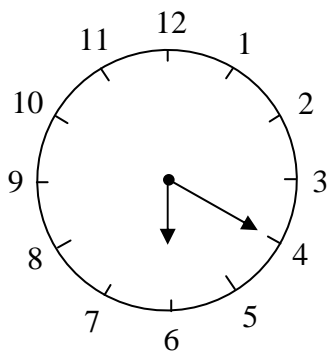
Even number: _____

(4 marks)

4. In a school there are 200 students.
50% of them play football.
How many students do this activity?

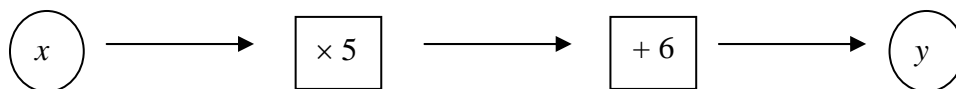
_____ (1 mark)

5. What is the time?



(2 marks)

6. This is a function machine.



Complete: When $x = 2$, then $y = ______$.

(1 mark)

7. Simplify:

$$3 (x - 4)$$

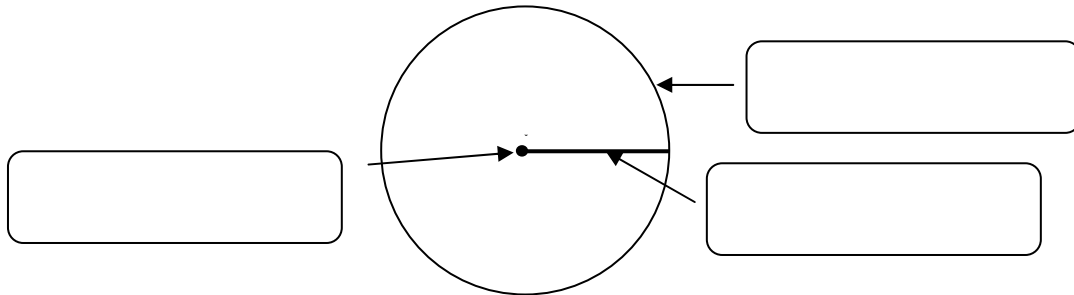
_____ (2marks)

8. Fill in with:

Radius

Centre

Circumference



(3 marks)

9. 16, 20, 4, 14, 6.

a) The **median** of this set of numbers is _____.

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

(2 marks)

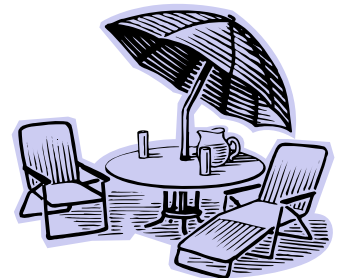
10. Circle the correct answer.

a) It is very hot in summer.

Impossible Unlikely Likely Certain

b) My ticket will win the International European Lottery.

Impossible Unlikely Likely Certain



(2 marks)



FORM 5 MATHEMATICS Scheme D TIME: 1h 30min

PAPER 2 (Main Paper)

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	Total Main	Non Calculator	Global Mark
Mark																

DO NOT WRITE ABOVE THIS LINE

Name : _____ **Class :** _____

CALCULATORS ARE ALLOWED

ANSWER ALL QUESTIONS

1. 36.82 368.2 3682 3.68 36820

- a) The largest number is _____ .
- b) The smallest number is _____ .
- c) The number _____ is written correct to 1 decimal place.
- d) Write the numbers in order. Begin with the **largest** number.

(5 marks)

2. Without VAT, a jacket costs €40. 18% VAT is added to the price.

a) How much VAT is added?

€ _____

b) Ann buys the jacket. How much does she pay?

€ _____

c) During a sale the shop gives a 20% discount.
How much will Jane save if she buys a jacket during the sale?

€ _____

d) How much does Jane pay for the jacket?

€ _____

(8 marks)

3. a) Simplify $4a + 2b - 3a + b$.

b) Find the value of $5s + 6q$, when $s = 3$ and $q = -1$.

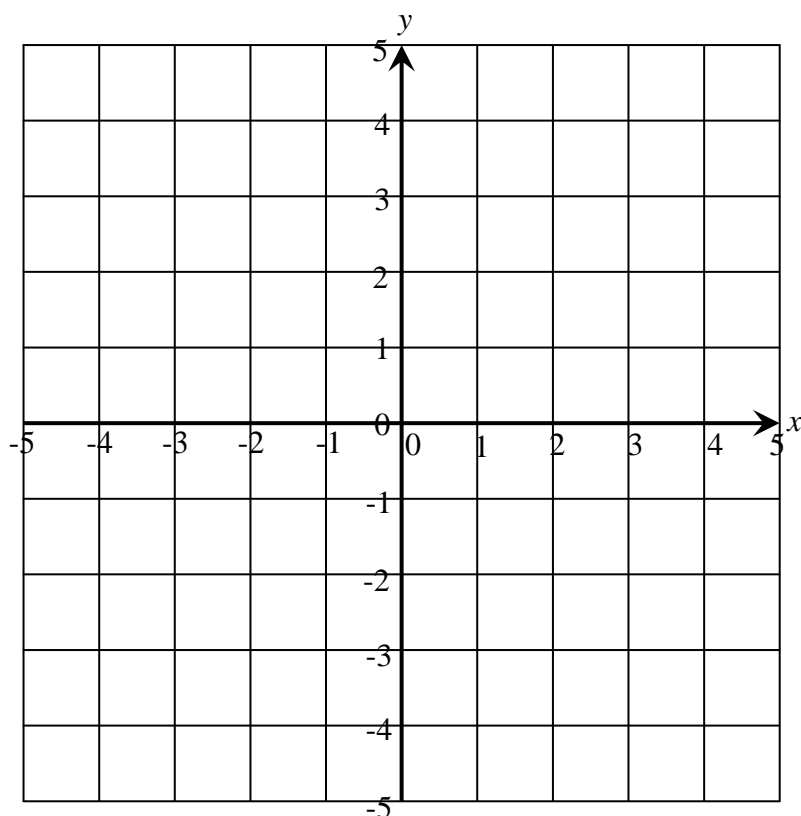
c) Find the value of p , when $5p - 6 = 14$.

(6 marks)

4. This is the table for the graph

$$y = 2x - 1$$

x	-2	0	2
y	-5	-1	3



a) Plot the co-ordinates given in the table.

Join them to get a straight-line graph.

b) Does the point $(-1, -3)$ lie on the straight-line graph?

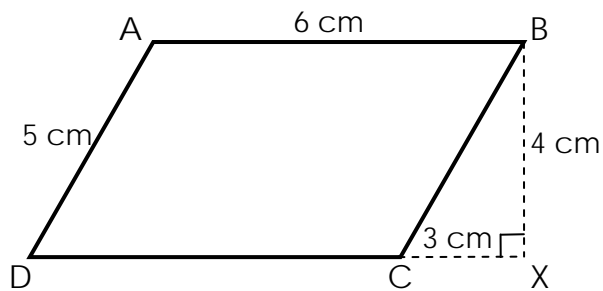
c) Use the graph to complete:

i) when $x = 1$, $y =$

ii) when $y = 5$, $x =$

(6 marks)

5.



ABCD is a parallelogram. BX is the perpendicular height.

a) Find the **perimeter** of the parallelogram ABCD.

b) Find the **area** of the parallelogram.
(Area of parallelogram = base \times height).

c) Find the **area** of triangle BCX.
(Area of triangle = $\frac{1}{2}$ base \times height).

d) What is the **total area** of the shape **ABXCD**?

(8 marks)

6. Sharon is using **LOGO**.

She types these commands:

PD

FD 100 LT 90 FD 50 BK 100

PU HOME

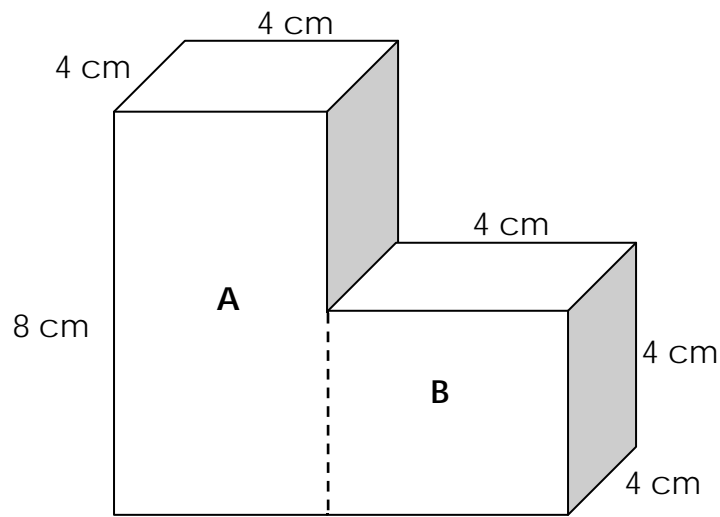


Draw the letter that the turtle will draw. **Start from the turtle.**

What is the total distance, in turtle steps, travelled by the turtle?

_____ turtle steps
(4 marks)

7.



The figure is made up of shape A and shape B.

a) Shape A is a **cuboid**.

What is the **volume** of this cuboid?

_____ cm^3

b) Shape B is a **cube**.

What is the **volume** of this cube?

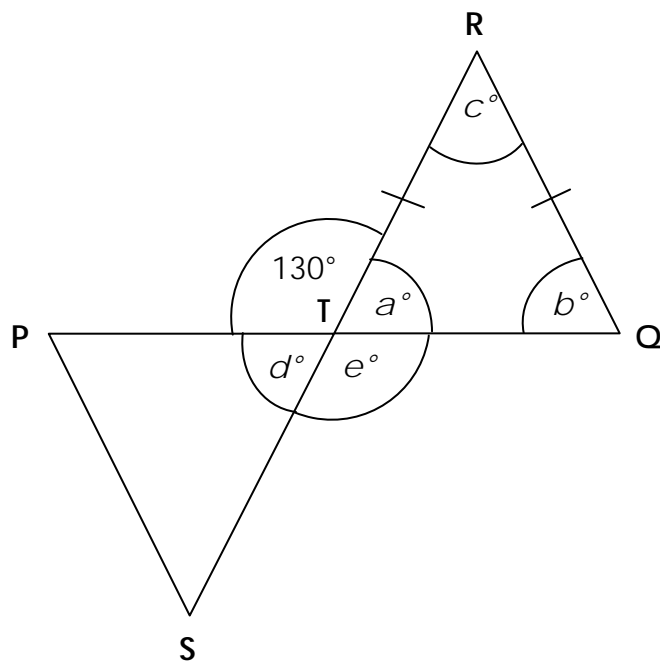
_____ cm^3

c) What is the **total volume** of the **whole** figure?

_____ cm^3

(8 marks)

8.



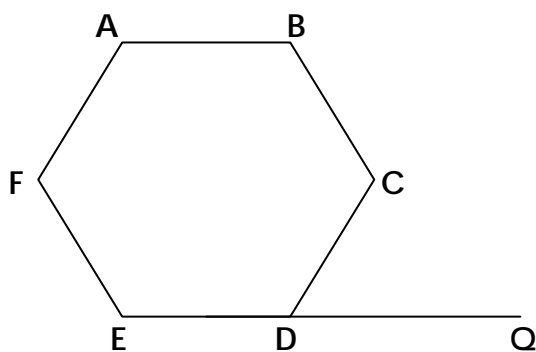
Triangle QRT is an **isosceles** triangle.

Find the value of: $a^\circ = \underline{\hspace{1cm}}$ $b^\circ = \underline{\hspace{1cm}}$ $c^\circ = \underline{\hspace{1cm}}$

$d^\circ = \underline{\hspace{1cm}}$ $e^\circ = \underline{\hspace{1cm}}$

(8 marks)

9.



ABCDEF is a **regular hexagon**.

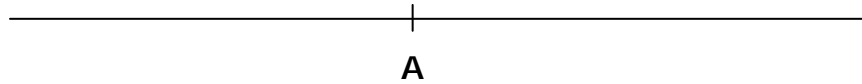
a) What is the **sum** of the exterior angles of **ABCDEF**?

b) Work out the size of **one** exterior angle of **ABCDEF**.

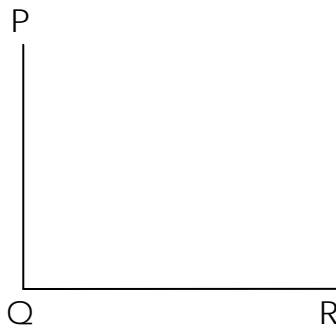
(3 marks)

10. Use ruler and compasses only and:

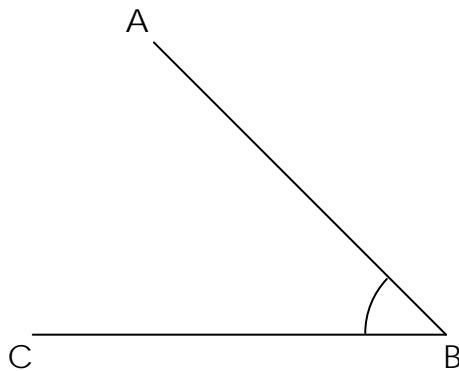
a) Draw an angle of 90° at point **A**.



b) Bisect angle PQR.

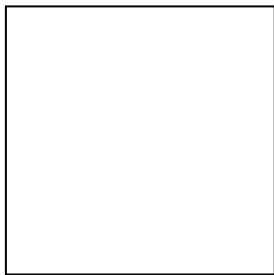


c) Use your protractor and measure angle ABC.



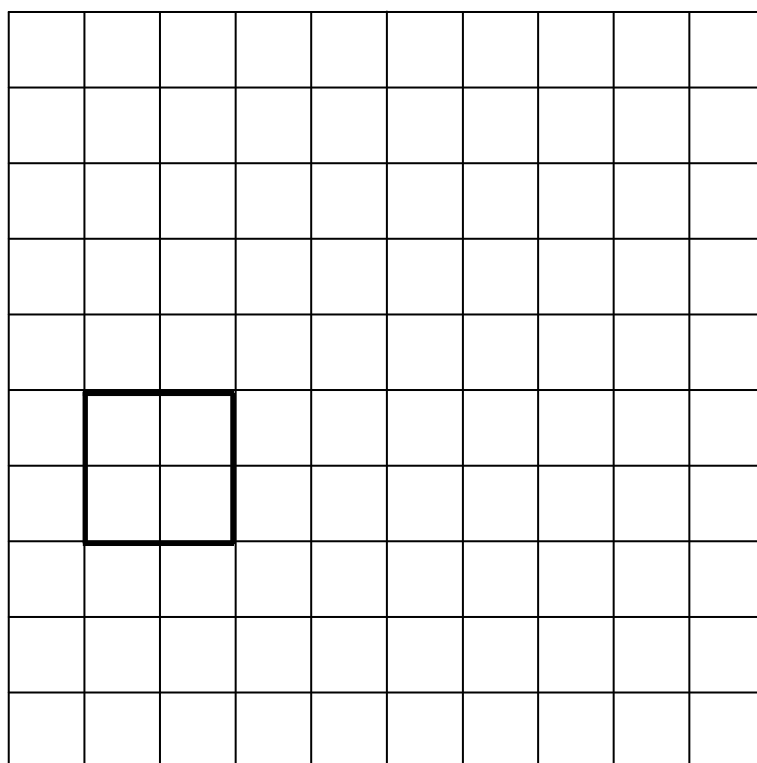
(7 marks)

11. a) Draw **all** the lines of symmetry of this square.



b) A square has rotational symmetry of order _____.

c)

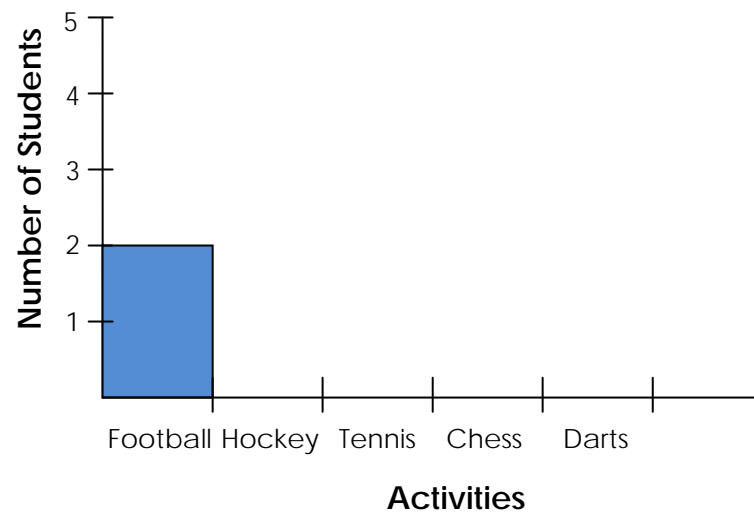


Draw an enlargement of the square using a scale factor of 2.

(8 marks)

12. Five students take part in the activities, as shown in the table:

	Peter	Annalise	Sharon	Tony	Agnes
Football	✓			✓	
Hockey			✓		
Tennis			✓	✓	✓
Chess	✓				✓
Darts		✓	✓		✓



a) Complete the bar chart.

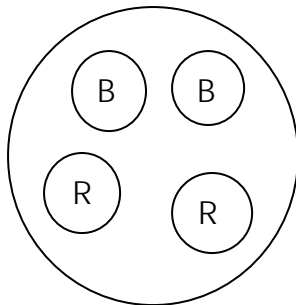
b) Which activity has the **smallest** number of students taking part?

(5 marks)

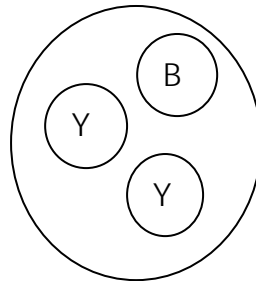
13. Francis has 2 bags:

Bag P contains 2 blue buttons and 2 red buttons and

Bag Q contains 2 yellow buttons and one blue button



Bag P



Bag Q

B = Blue button
R = Red button
Y = Yellow button

Francis picks **one** button from **each** bag.

a) Complete this possibility space.

	Bag P				
Bag Q		B	B	R	R
	Y	(Y , B)			(Y , R)
	Y		(Y , B)		
	B			(B , R)	

b) What is the probability that Francis picks two buttons that have the same colour?

c) What is the probability that Francis picks two buttons that have a different colour?

(4 marks)

End of Paper