SECONDARY SCHOOL ANNUAL EXAMINATIONS 2005

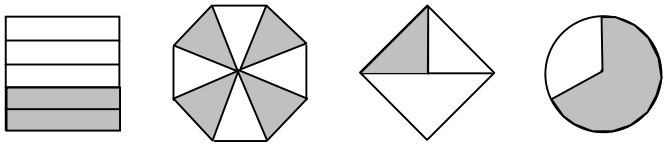
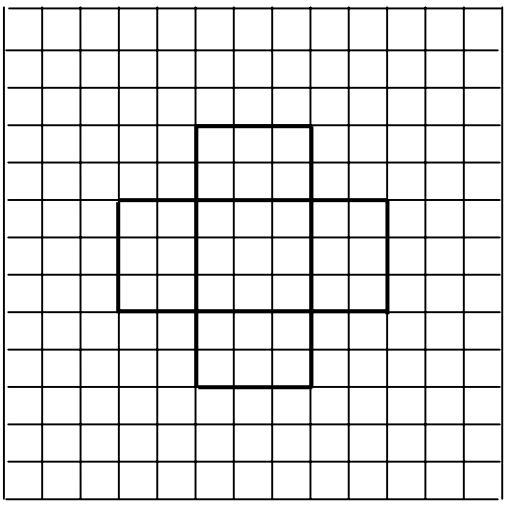
Educational Assessment Unit - Education Division

FORM 2 **MATHEMATICS (NON-CALCULATOR)** **TIME: 10 minutes**

Name _____ **Class** _____

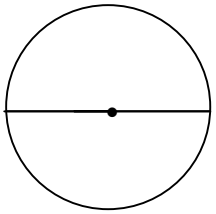
Mark

- Answer **ALL** Questions**.**
- Each question carries 1 mark.
- **Calculators, rulers, protractors** and other **mathematical instruments** are **not allowed.**
- On your desk you should have nothing except for **pen, pencil** and the **examination paper**.
- Write down your answer only in the space provided.

QUESTION	Space for working if required
1. The May special edition of "Sports News" sold 31 582 copies in one day. Write this number correct to the nearest thousand. **Ans:** _____	
2. Divide 750 in 25 equal parts. **Ans:** _____	
3. Which is the best estimate for $\sqrt{66}$? 6, 7, 8, 9, 30, 60. **Ans:** _____	
4. Which shape is 40% shaded?  A B C D **Ans:** _____	
5. Find the probability of choosing, at random, the letter E from the word: **I N T E G E R** **Ans:** _____	
6.  This is the net of an **open** cuboid. Change it into a net of a **closed** cuboid.	

7.

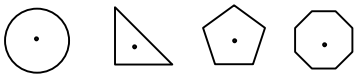
The **diameter** of the circle is 6cm.
The **circumference** is approximately:



6cm, 12cm, 18cm, 36cm.

Ans: _____

8.



Which of the above shapes completes the following pattern correctly?

9. Fill in with the correct number:

$$\frac{7}{15} - \frac{1}{5} = \frac{\square}{15}$$

10. Fill in the boxes correctly, choosing numbers from this list:

0.1 0.2 20 0.24 0.024 48

$$\square \times \square = 0.48$$

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2005

Educational Assessment Unit - Education Division

FORM 2 **MATHEMATICS (Main Paper)** **TIME: 1h 50 min**

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

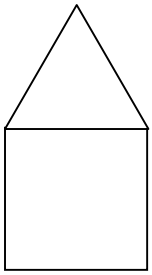
DO NOT WRITE ABOVE THIS LINE

Name: _____ **Class:** _____

Calculators are allowed but all necessary working must be shown

ANSWER ALL QUESTIONS.

1.



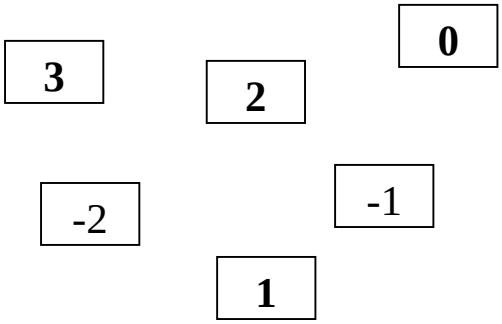
a) Complete the diagram to make the net of a **pyramid**.

b) Fill in:

A pyramid has _____ **faces**.
A pyramid has _____ **vertices**.

(4 marks)

2.



a) On the left you can see the mixed up buttons of a lift in a supermarket.

Put them in the right order.

b) Which 2 buttons take me to the basement levels?

and

(4 marks)

---

3. The chart below shows the opening times of **Tommy's Take Away**.

Monday	--------	5.00 p.m. – 10.00 p.m.
Tuesday	--------	4.00 p.m. – 10.00 p.m.
Wednesday	--------	4.00 p.m. – 10.00 p.m.
Thursday	--------	3.00 p.m. – 5.00 p.m. 7.00 p.m. – 10.30 p.m.
Friday	--------	3.00 p.m. – 5.00 p.m. 7.00 p.m. – 10.30 p.m.
Saturday	11.30 a.m. – 1.30 p.m.	4.00 p.m. – 11.00 p.m.
Sunday	11.30 a.m. – 1.30 p.m.	4.00 p.m. – 10.30 p.m.

a) Is the Take Away open on Fridays at 6.00 p.m.?

_____

b) Last week, Marlene bought a hotdog from **Tommy's Take Away** at 10.45 p.m.
Which day was it?

_____

c) For how long is the shop open on Thursdays?

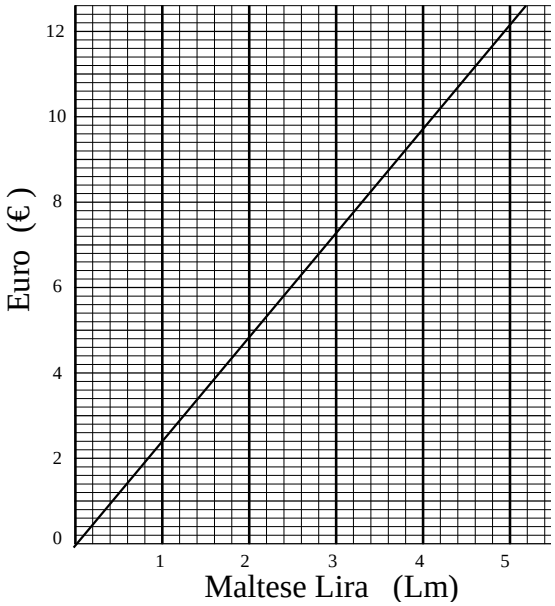
_____

(4 marks)

---

4. a) Paul has 50 red, 70 green and 30 blue marbles in a bag.
He takes out one marble at random.
What is the probability that the marble is **red**?

_____



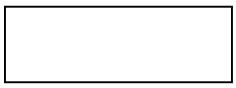
b) Use the graph to complete:
(Give your answer correct to the nearest 10 c.)

€6 = Lm _____

(4 marks)

---

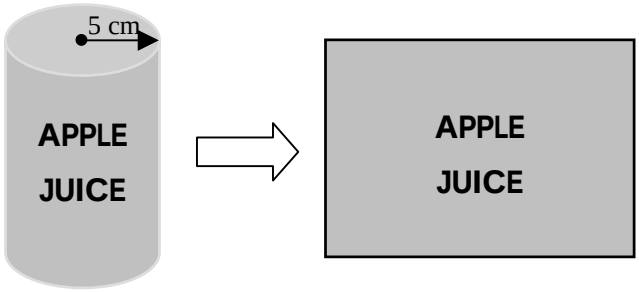
5. a)



The perimeter of the rectangle is 7 cm.

Find the value of *b*.

_____ cm



Roland takes the label off a tin of apple juice. The label goes exactly **once** round the tin. The radius of the tin is 5 cm.

How **long** is the label, to the nearest whole number?
($C = 2\ \pi r$)

_____cm

(4 marks)

---

6. a) Complete:

(i) 4 litres = _____ ml

(ii) 35 cm = _____ m

b) A bottle of Kalpool contains 100 ml of medicine.
Pamela needs to take a teaspoon of 5 ml **three times** each day.

(i) How much medicine does she take per **day**?

_____ml

(ii) How much medicine is **left** after 6 days?

_____ml

(iii) How many **teaspoonfuls** of medicine will be left?

_____teaspoon/s

(6 marks)

---

7. a) Fill in:

(i) $48000 \div \square = 2400$

(ii) $\square \times 30 = 120$

(iii) $4^{\square} = 16$

b) Write 6.885 correct to 2 decimal places. _____

c) Complete the sequence:

$0, 1, 3, 6, \square, 15, 21, 28.$

d) Give the **range** of these measurements:

4 cm, 7 cm, 3 cm, 9 cm.

_____

(6 marks)

---

8. a) Which number between 35 and 50 is a **MULTIPLE** of **both** 3 and 5?

_____

b) At a party 30% are women and **twice** as many are children. What percentage are **men**?

_____

c) Work out:

$6 + 8 \div 2$

_____

(6 marks)

---

9. a) Work out the value of $5y^2z$ when $y = 3$ and $z = 4$.

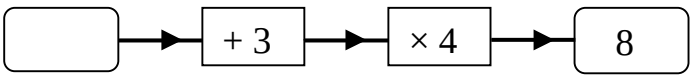
_____

b) Find the value of x, when:

$5x - 4 = 16$

_____

c) Complete this function machine:



(6 marks)

---

10. a) Michelle asked **20** of her friends how long they spent playing computer games last weekend.
She recorded this information on the table shown:

Time spent playing computer games(min)	Frequency
1 – 50	2
51 – 100	
101 – 150	7
151 - 200	6
Total	

(i) Complete the table by filling in the **2 spaces**.

(ii) How many children played computer games for **more** than 100 minutes?

_____

(iii) 5 of Michelle's friends owned the computer game "Safari Exploration". What fraction of the total is this?

_____

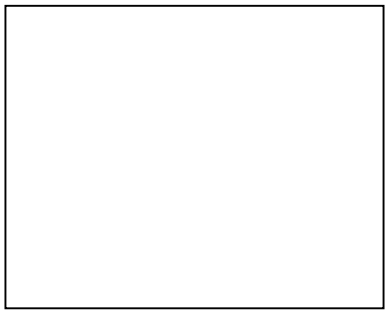
b) Mario got these marks in 5 subjects:
55, 60, 75, 83, 77.
What was his **mean** mark?

_____

(6 marks)

---

11. Ms Abela drew the plan of her garage.



Scale: 1 cm ≡ 2 m

a) Using a ruler, measure and then write down:

i) the length of the plan: _____ cm

ii) the width of the plan: _____ cm

b) The **actual** garage is

_____ m long

_____ m wide

c) The area of the garage floor is _____ m^2

d) Ms Abela wishes to tile the garage floor.
How much will it cost her at Lm1.50 per m^2?

Lm_____

(8 marks)

---

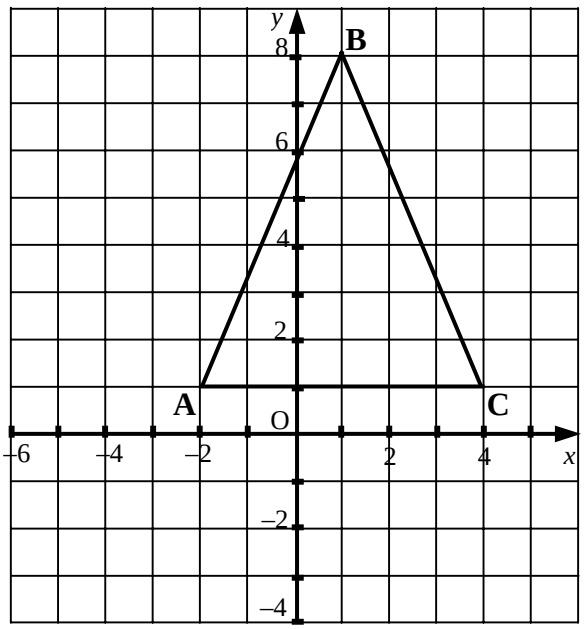
12. a) Draw a circle of radius 4 cm.
b) Using ruler and compasses only, draw the regular hexagon ABCDEF on the circumference of the circle. **Label** your diagram.

c) What can you say about the straight lines AB and ED?

AB and ED are_____ and_____.

(8 marks)

13.



a) Write down the coordinates of A and C.

A = (,) C = (,)

b) What is triangle ABC called?_____

c) Taking 1division ≡1 cm, work out the **area** of triangle ABC.

_____

d) Plot the point P = $(\mathbf{1}, \mathbf{-3})$.
Join A and C to P.
BP is the line of symmetry of the quadrilateral ABCP.
What is the quadrilateral ABCP called?

_____

(8 marks)

---

14 a)

	A	B	C	D
1		object X	object Y	object Z
2	weight in **kg**	3.07	0.435	1.5
3	weight in **g**	3070	435	?

Maria recorded the weights in kg of 3 objects in **ROW 2** of the spreadsheet shown.

(i) Which one of the formulae below did she write in cell **B3** to change the weight of object X from kilograms to grams?

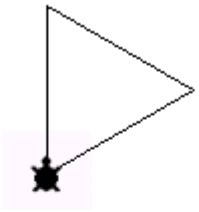
=B2+1000 or **=B2/1000** or **=B2*1000**

_____

(ii) What number should she get in cell **D3** if she types the correct formula?

_____

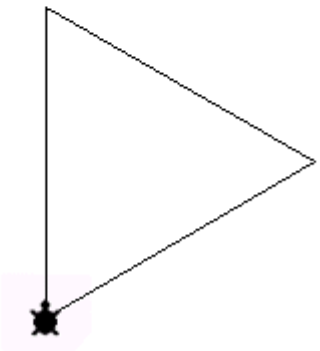
b)



The turtle is shown at the starting point.
To draw an equilateral triangle with sides each of length 40 turtle steps, Henry wrote the following Logo commands:

PD REPEAT _____[FD 40 RT 120]

(i) Fill in the empty space above to complete it correctly.



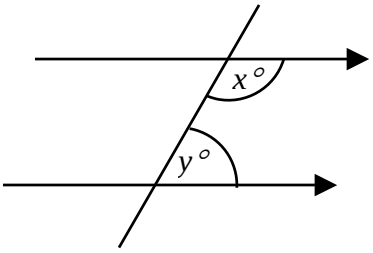
(ii) Henry wishes to draw the same shape but with each side twice in length.

Fill in his missing commands:

REPEAT _____[FD _____RT _____]

(8 marks)

15. a)

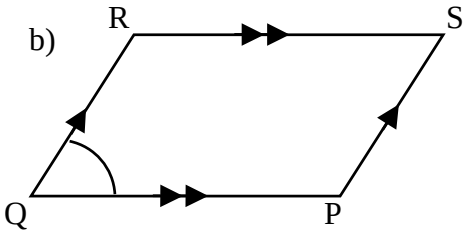


x and ***y*** are interior angles between two parallel lines.
Which of the following is the correct statement?

(i) x° + y° = 90°
(ii) x° + y° = 180°
(iii) x° = y°

_____

b)



Not drawn to scale

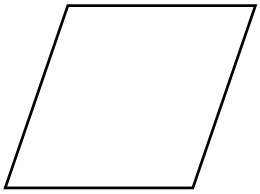
PQRS is a parallelogram in which angle Q = 70°.

(i) Fill in:

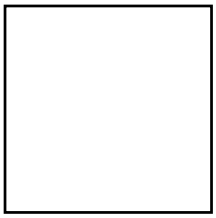
Angle S = _____

(ii) What is the order of **rotational** symmetry of PQRS? _____

c)



RHOMBUS



SQUARE

Which of the following statements is **not** correct?

(i) **Both** the rhombus and the square have all sides equal.

(ii) The diagonals of **both** the rhombus and the square meet at right angles.

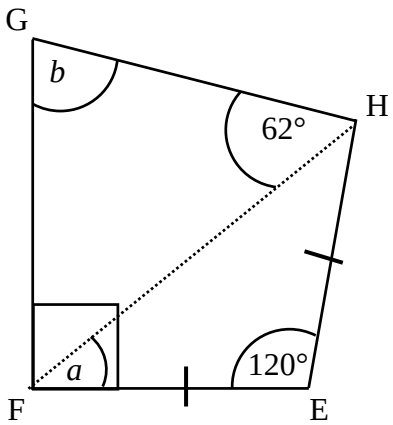
(iii) **Both** the rhombus and the square have only 2 lines of symmetry.

(____) is not correct.

d) In the quadrilateral EFGH,
angle EFG = 90° and EF = EH.
Calculate the angles marked with the letter.

(i) a =

(ii) b =



Not drawn to scale

(8 marks)

End of Paper