SECONDARY SCHOOL ANNUAL EXAMINATIONS 2008
DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Educational Assessment Unit

A

FORM 1 **MATHEMATICS - SCHEME A** **TIME: 45 minutes**
(Non-Calculator Paper)

Name : _____ **Class : _____**

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

INSTRUCTIONS TO CANDIDATES

- **Answer all questions.**
- **This paper carries 40 marks.**
- **Calculators and protractors are not allowed.**

1. Simplify: **32 : 16 : 8**

_____

_____ **(*1 Mark*)**

2. (a) Round 1346.58 to the **nearest whole number**. _____

(b) Round 1346.58 to the **nearest 10**. _____

(c) Round 1346.58 to the **nearest 100**. _____

_____ **(*3 Marks*)**

3. A ticket for an adult to see a play costs €12.
A child only pays €9.

What is the total cost for a family consisting of **two adults and three children**?

_____

_____ **(*3 Marks*)**

4. (a) Add together the first five prime numbers.

_____

(b) Subtract your answer from 59.

_____

(c) The answer in (b) is even. ~~**yes**~~ **/ no** (cross out the wrong one)

prime. **yes / no**

a multiple of three. **yes / no**

_____ **(*4 Marks*)**

5. (a) Write $3(x+y)$ without brackets. _____

(b) Work out the value of $4(y-x)$ when $x=3$ and $y=5$.

_____

(c) Remove the brackets and then tidy up $6(x+y)+2(x-y)$.

_____

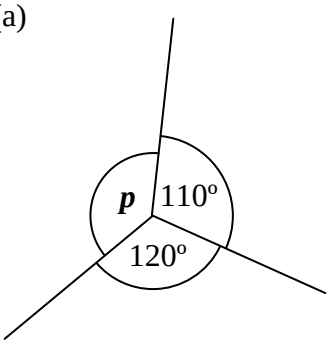
_____ **(*4 Marks*)**

Name : _____ Class : _____

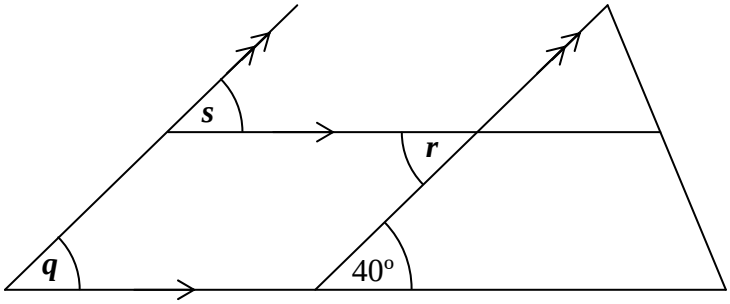
A

6. Find the value of each unknown angle in these diagrams.

(a)



(b)



p = _____ ***q*** = _____

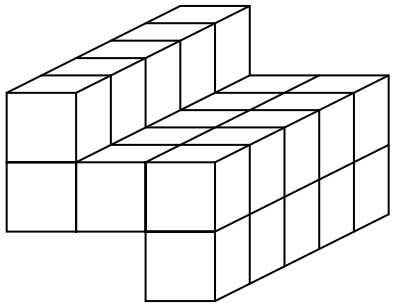
r = _____

s = _____

(*4 Marks*)

7. Each cube is one cubic centimetre.

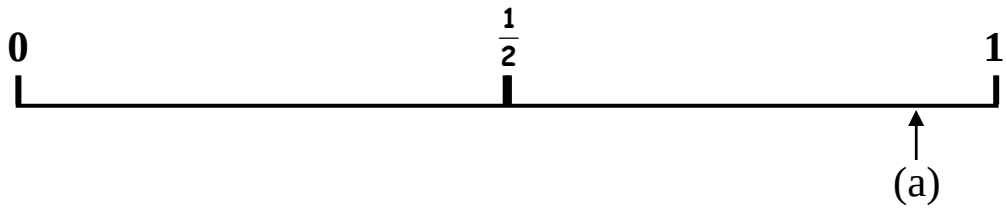
Find the **volume** of this shape.



_____

(*1 Mark*)

8. The figure shows a probability scale.
Mark, with **an arrow,** each of the events below on the scale.



(a) You will always bring your lunch to school next year. (Already done for you)

(b) The first person you see when you switch on the TV is a female.

(c) The first car you see is red.

(d) Tomorrow there will be cars on our roads.

(e) You will become 5 metres tall.

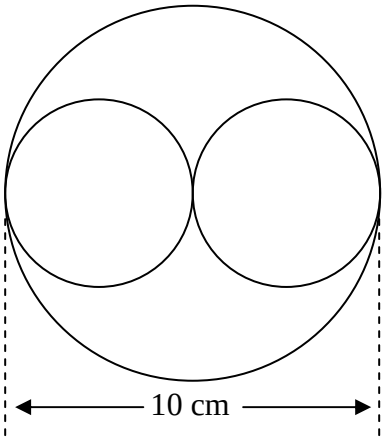
(*4 Marks*)

9. **Draw** as accurately as you can the circle pattern on the right.

The pattern consists of two **equal** small circles and a larger one.

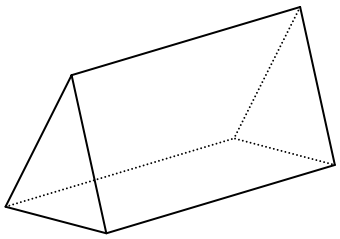
The two small circles **just touch** one another and the bigger circle.

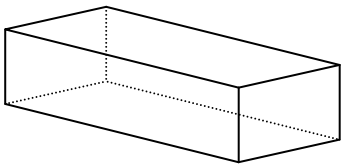
Begin by drawing the largest circle.
Its **diameter is 10 cm**.



(*4 Marks*)

10.





Fill in the table.

Shape	Number of faces	Number of vertices	Number of edges
Triangular prism			
Cuboid			

(*3 Marks*)

11. A magician put some chickens under his hat, and said, "ABRACADABRA! **Multiply by 3** and **add 4**!"

He lifted the hat and there were now **22** chickens! The trick had worked!

How many chickens did he put under his hat **before** he performed the trick?

_____

(*3 Marks*)

12.

A chocolate sweet costs **15 c**.
I buy some of these sweets for a party and pay **€15.75**.

How many sweets do I buy?

_____

(*3 Marks*)

13. Match, **by drawing an arrow**, the measurement of each of the objects in list **A** with an appropriate measure from list **B**.

A	**B**
The height of a chair	29 ***ml***
The mass of a calculator	130 g
The contents of a small bottle of eye-drops	0.25 km
	0.8 kg
	82.3 cm
	0.4 ***l***

(*3 Marks*)

END OF PAPER

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A

FORM 1 **MATHEMATICS – SCHEME A** **Time : 1h 15min**
(Main Paper)

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.

1. Jennifer goes to the sweet shop.
In her purse she has **two 20 c** coins, **one 10 c** coin, **two 5 c** coins and **one 2 c** coin.

She wishes to buy a bar of chocolate costing **27 c**, a bag of sweet drops costing **38 c** and a packet of biscuits costing **33 c** but finds that she can buy **only two** items.

Which two items can she buy?

_____ and _____

(*3 Marks*)

2. (a) Share **€68.31** equally among **4** friends.
Calculate, correct to the **nearest cent**, how much each friend receives.

_____

(b) Petra has **€19.26** in her purse.
She buys a birthday card for **€1.05**, a CD for **€8.86** and some flowers for **€3.27**.
How much money does she have **left**?

_____

(*5 Marks*)

3. A motor-scooter uses a mixture of oil and petrol.

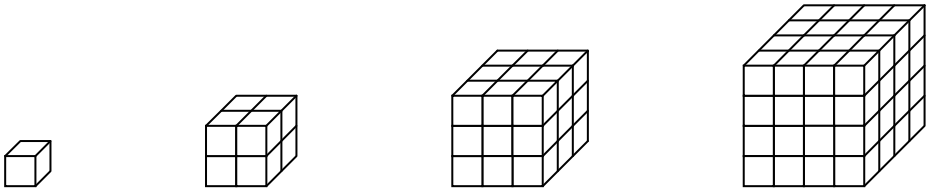
2500 ml of oil is mixed with **22.5 l** of petrol.

Express this as a **ratio** and **simplify** it.

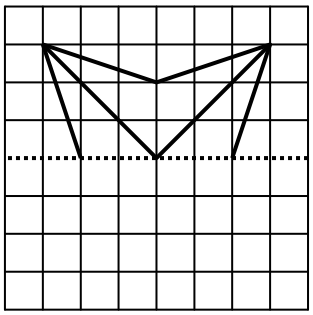
(*4 Marks*)

4. (a) Mario has 81 small squares made of cardboard. Each small square is of side 1 cm. He uses all the squares to form a large square. What is the length of a side of this square?

(b) How many small cubes are there **altogether** in the four shapes below?



(*4 Marks*)

5. 

(a) The dotted line is the line of symmetry. Draw the image.

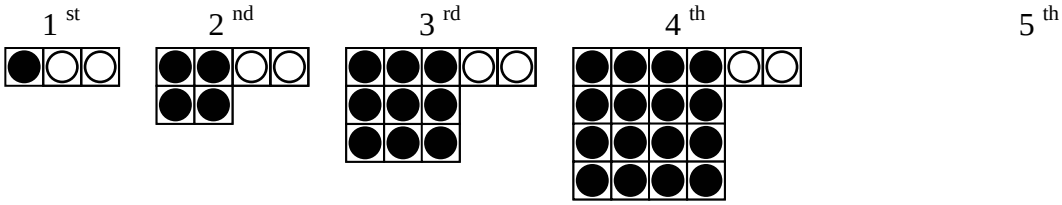
(b) What is **the order of rotational symmetry** of the whole shape?

(*4 Marks*)

Name : _____ Class : _____

A

6. Look carefully at this sequence of patterns:



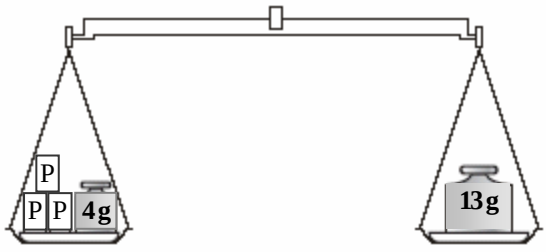
(a) **Draw** the 5th pattern.

(b) **Complete** the table.

Pattern number	**1**	**2**	**3**	**4**	**5**	.....	**9**
Number of black circles	1	4				.....	
Number of white circles	2	2				.....	
Total number of circles	3	6				.....	

(*6 Marks*)

7. The figure shows a weighing scales. The packages P have the same weight.

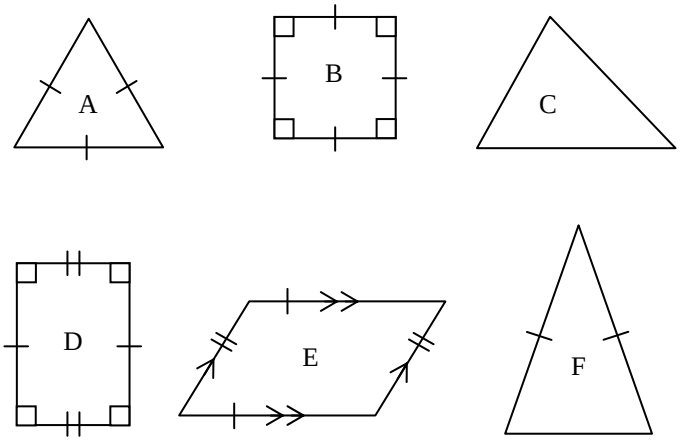


(a) Write down the **equation** for this set of scales.

(b) **Solve the equation** to find how much each package weighs.

(*5 Marks*)

8.

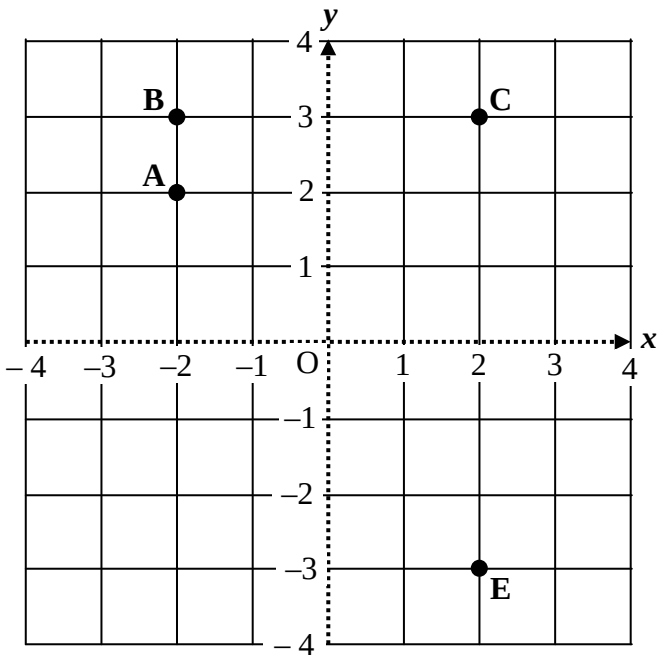


Fill in the table to describe these shapes accurately.

Shape	Name	Regular or irregular?
A	---------- triangle	
B	----------	
C	---------- triangle	
D	----------	
E	----------	
F	---------- triangle	

(*6 Marks*)

9.



(a) **Plot** and label these points:

D (– 2, – 3) **F** (2, – 2)

(b) **Join**:

A to **B**, **B** to **C**, **C** to **D**, **D** to **E** and **E** to **F**.

(c) **What** shape have you drawn?

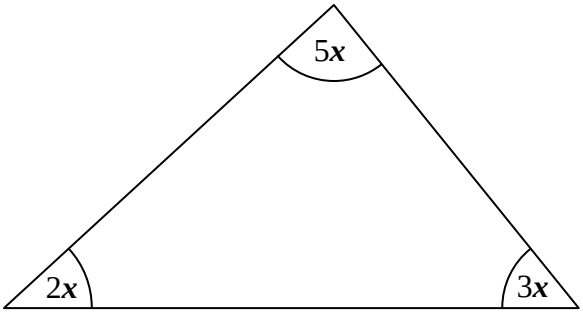
(d) How many **lines of symmetry** does this shape have?

(*6 Marks*)

10. (a) What is the **sum** of the three angles of **any triangle**?

_____

(b) What is the **sum** of the three angles of this triangle? Give your answer **in terms of *x***.



_____

(c) Write down an **equation** using your answers in (a) and (b).

_____

(d) **Solve** the equation to find the value of ***x***.

_____

(e) What is the size of the **largest** angle?

_____

(*7 Marks*)

11. The temperatures at dawn for the first **ten** days of April were:

20°C, 22°C, 23°C, 21°C, 19°C, 22°C, 23°C, 21°C, 20°C, 20°C

(a) What was the **mean** temperature?

_____

(b) What was the **mode**? _____

(*4 Marks*)

12. Mr. Abela is the P.E. teacher of a class of **30** students.
He collects data about how many sit-ups each pupil can do per minute.

Number of sit-ups per minute									
14	24	32	22	3	17	18	26	6	12
11	23	6	11	25	7	13	37	27	9
28	29	23	10	25	14	27	4	8	22

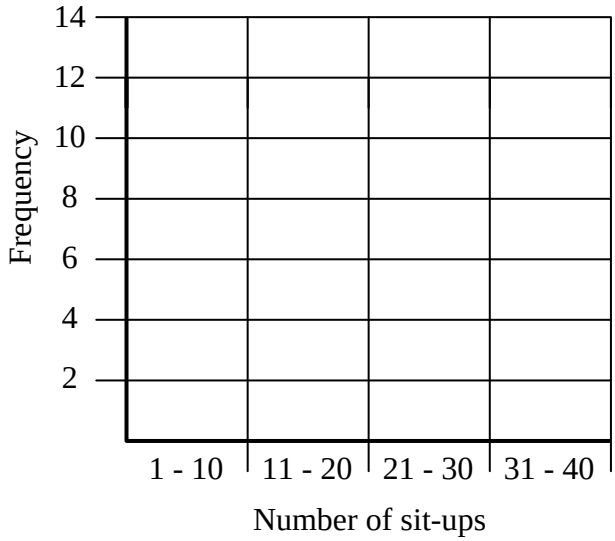
(a) What is the **range** of the number of sit-ups?

_____

(b) Fill in the **tally chart** below:

Number of sit-ups	**Tally**	**Frequency**
1 – 10		
11 – 20	𝍸 III	8
21 – 30		
31 – 40		
	Total	

(c) **Draw** a bar chart to show Mr. Abela's data.



(*6 Marks*)

END OF PAPER