

**SECONDARY SCHOOL ANNUAL EXAMINATIONS 2009**

Directorate for Quality and Standards in Education  
Educational Assessment Unit



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**FORM 4**

**MATHEMATICS SCHEME D**

**TIME: 30 minutes**

**Non-calculator Paper**

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Name: \_\_\_\_\_

Class: \_\_\_\_\_

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

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**Instructions to Candidates**

- **Answer ALL questions.**
  - **This paper carries a total of 20 marks.**
  - **Calculators and protractors are not allowed.**
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1. Write in **figures**:

fifteen thousand six hundred and seventeen: \_\_\_\_\_

(1 mark)

2. **Add:**

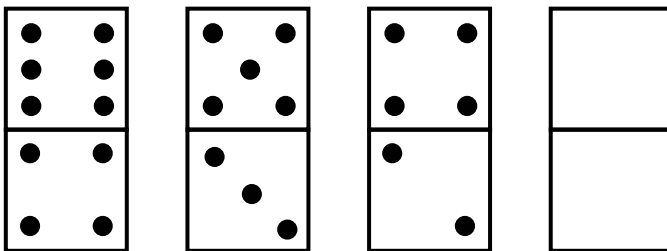
$$\begin{array}{r} 43.06\text{km} + \\ 38.49\text{km} \\ \hline \\ \hline \end{array}$$

(1 mark)

3. **Multiply:**  $24 \times 9$

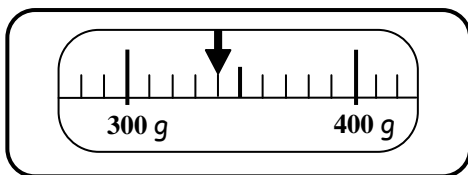
\_\_\_\_\_ (2 marks)

4. **Draw** the dots of the next domino in the sequence.



(2 marks)

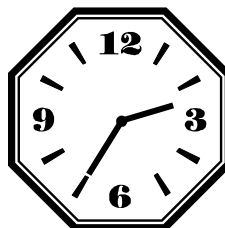
5. Look at the diagram.



The arrow is pointing to \_\_\_\_\_ g.

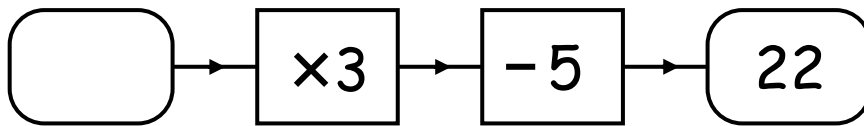
(1 mark)

6. Write down the time shown on the clock.



\_\_\_\_\_ (2 marks)

7. **Complete** the function machine.



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(1 mark)

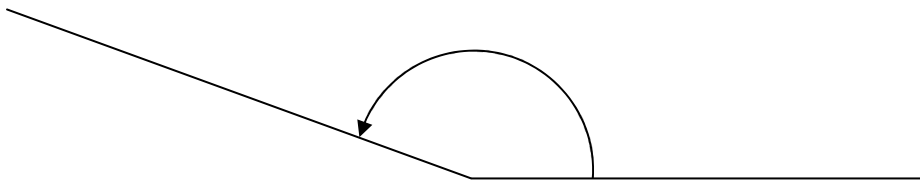
8. Write in **lowest terms**.

$$\frac{18}{27} = \underline{\quad}$$

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(2 marks)

9. Write down an **estimate** for this angle.

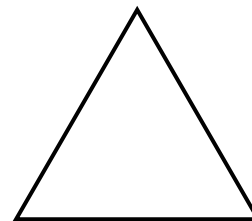


o

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(1 mark)

10. Draw the **lines of symmetry** of this shape.



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(2 marks)

11. Work out.

a)  $9 - 15$

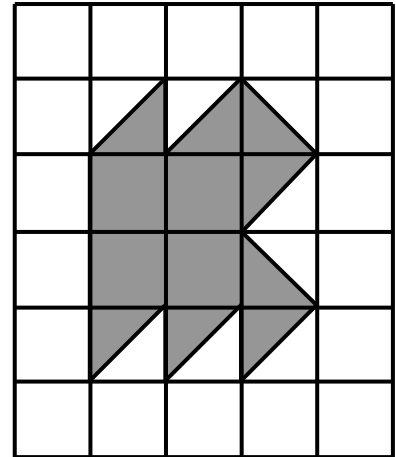
b)  $(-3) \times 5$

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(2 marks)

12. Each side of a square is 1 cm.  
Find the area of the shaded shape.



\_\_\_\_\_ cm<sup>2</sup>

(1 mark)

13. A T-shirt costs €13.  
How many T-shirts can I buy for €195?



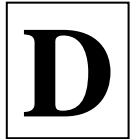
\_\_\_\_\_ T-shirts

(2 marks)

**END OF PAPER**

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FORM 4

MATHEMATICS SCHEME D

TIME: 1h 30min

Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	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. Use your calculator to work out  $623.9 \div 5.3 - 1.635$

Write your answer:

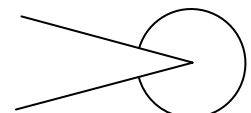
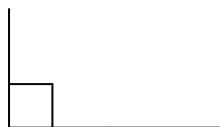
a) correct to nearest whole number: \_\_\_\_\_

b) correct to 1 decimal place: \_\_\_\_\_

c) correct to 2 decimal places: \_\_\_\_\_

(3 marks)

2. Join each angle to its correct name.



acute angle

reflex angle

obtuse angle

right angle

(3 marks)

3. Kevin bought all these items for his office.



a) How much did Kevin have to pay?

€ \_\_\_\_\_

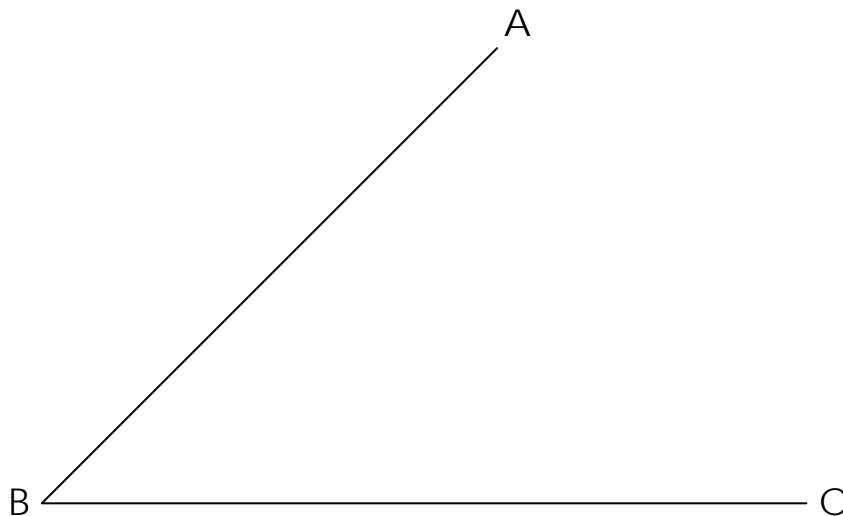
b) Kevin gave the salesgirl a €50 note.  
How much change did he receive?

€ \_\_\_\_\_

(4 marks)

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4. Use compasses, ruler and pencil to bisect angle ABC.



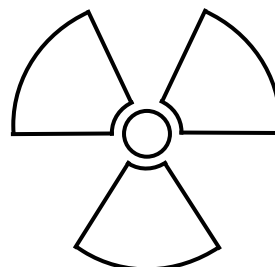
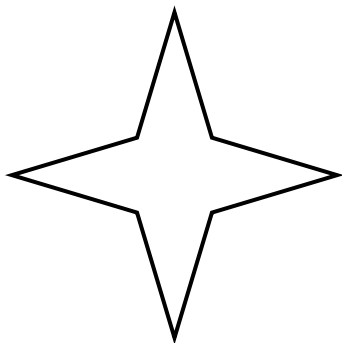
(4 marks)

Name \_\_\_\_\_

Class \_\_\_\_\_

**D**

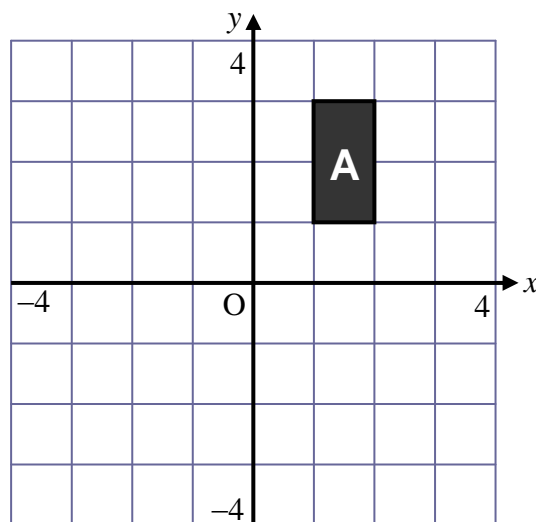
5. a) Draw **all** the lines of **symmetry**. b) Write down the **order of rotational symmetry** of the shape.



Order of rotational symmetry: \_\_\_\_\_

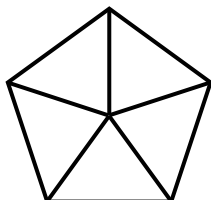
- c) i) Draw the **reflection** of shape A in the **x-axis**.  
Name this shape B.

- ii) Draw the **reflection** of shape B in the **y-axis**.  
Name this shape C.



(8 marks)

6. a) Shade  $\frac{2}{5}$  of the shape.



- b) Change  $\frac{2}{5}$  to a percentage.

\_\_\_\_\_ %

- c) Make equivalent fractions:

$$\frac{2}{5} = \frac{\quad}{35}$$

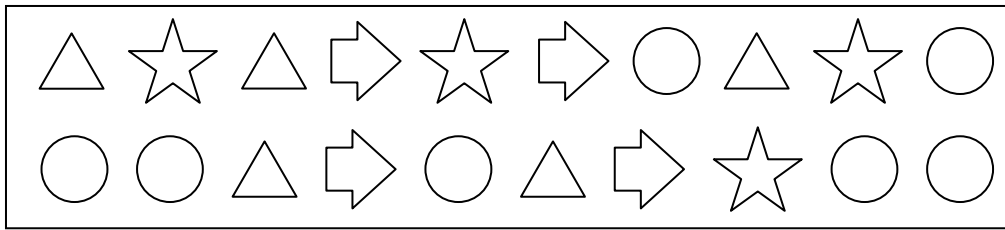
- d) Work out:

$$\frac{2}{5} - \frac{2}{35}$$

\_\_\_\_\_

(7 marks)

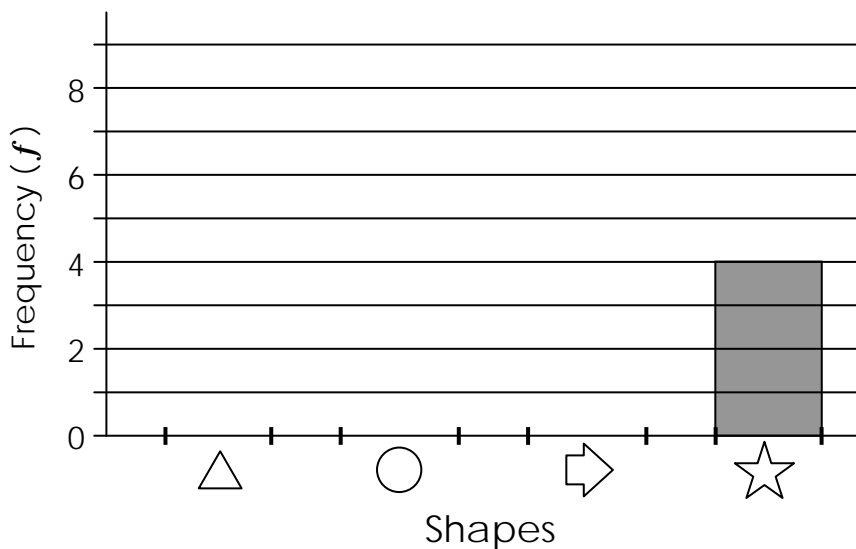
7. Claire drew these shapes on her copybook.



a) Use the data above to fill in the table:

Shape	Tally	$f$
	/ / / /	4
Total number of shapes		

b) Complete the bar chart.



c) Fill in correctly.

i) What **percentage** of the shapes is s ? \_\_\_\_\_%

ii) There are \_\_\_\_\_ more s than s.

iii) The **probability** of choosing a at random is \_\_\_\_\_.

(11 marks)

8. Fill in the blanks using the following words.  
Each word can be used **only once**.

**certain**

**impossible**

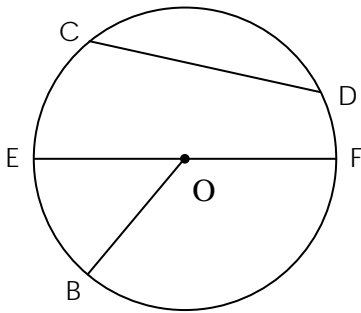
**likely**

**unlikely**

- a) If I throw a six-sided dice I will get a 9. \_\_\_\_\_
- b) It will rain in February. \_\_\_\_\_
- c) I will grow to be 120 years old. \_\_\_\_\_
- d) July comes after June. \_\_\_\_\_

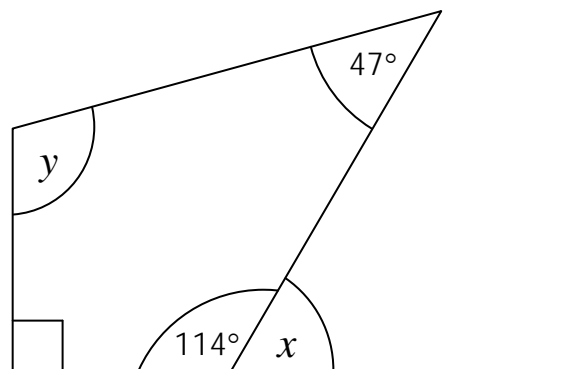
(4 marks)

9. a) Look at the diagram and fill in the blanks.



- i) **OB** is called the \_\_\_\_\_ .
- ii) \_\_\_\_\_ is called the **diameter**.

b) Find the size of each angle marked with a letter.



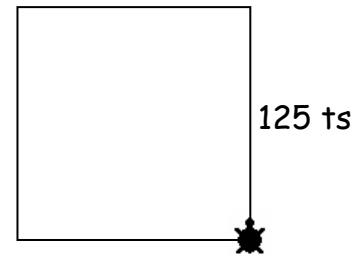
$x =$  \_\_\_\_\_

$y =$  \_\_\_\_\_

(6 marks)

10. a) Complete the LOGO commands to draw a **square** of side 125 turtle steps (ts) as shown in the diagram.

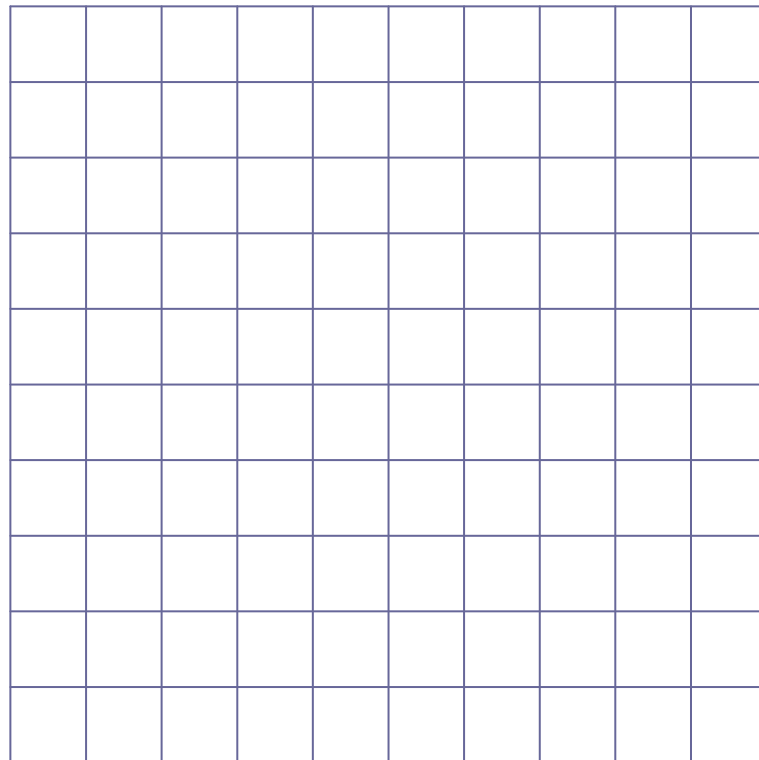
PD  
REPEAT \_\_\_\_ [ \_\_\_\_ 125 \_\_\_\_ 90 ]



- b) Work out the **perimeter** of the square in ts.

\_\_\_\_\_ ts  
(5 marks)

11. a) On the grid draw the **net** of a **cube of side 2 cm**.  
Each square on the grid is of side 1 cm.

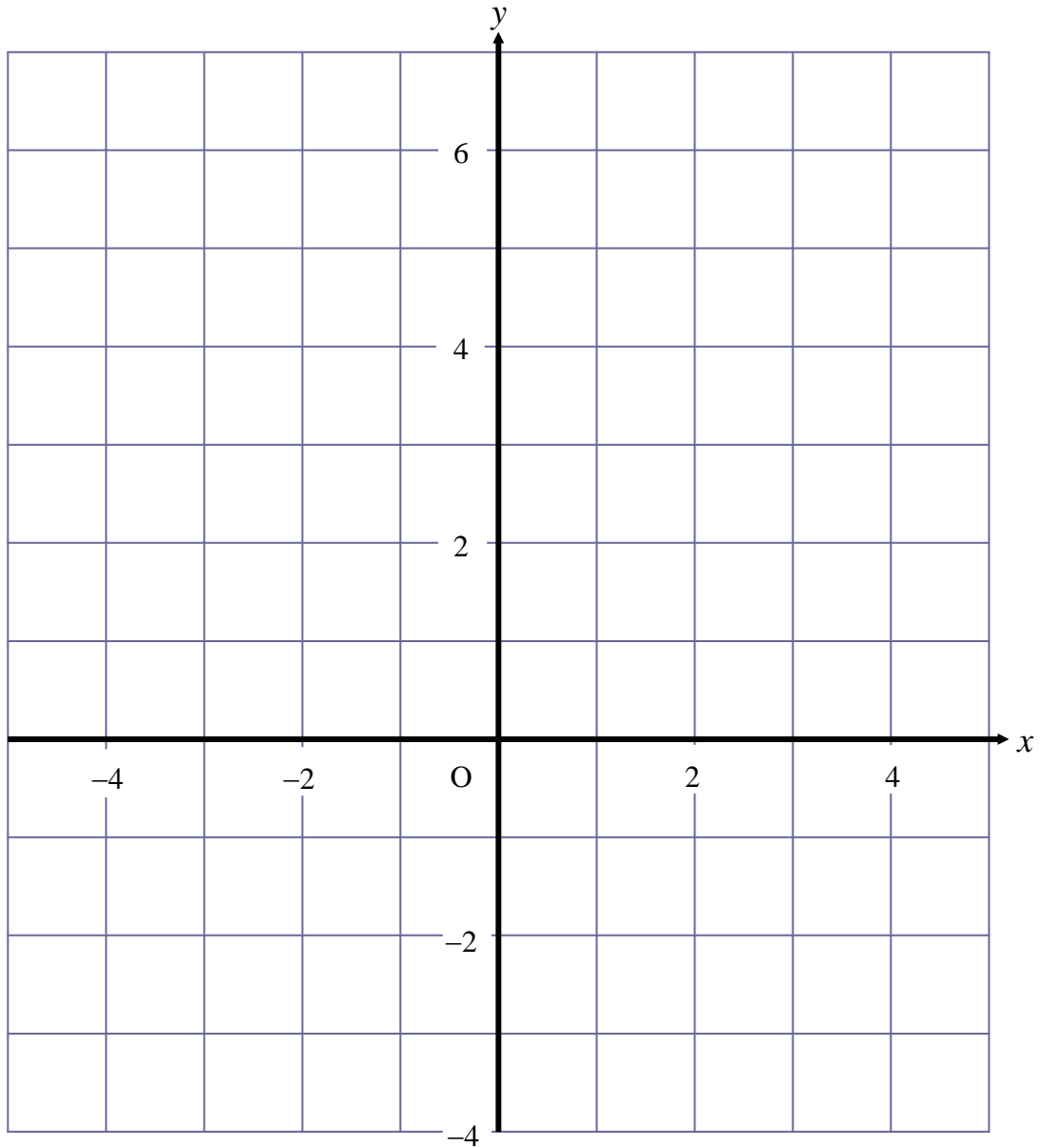


- b) Find the volume of a **cube** of side 8.5 cm.

\_\_\_\_\_ cm<sup>3</sup>  
(6 marks)

12. a) Plot the following points on the grid:

- A (2, 2)
- B (-1, 2)
- C (-1, 6)
- D (2, 6)



b) Join A to B, B to C, C to D and D to A.

The shape ABCD is called a \_\_\_\_\_.

c) Draw the **translation** of this shape **3 units to the left** and **5 units down**.

(9 marks)

13. a) Simplify:  $8x - 3x - 7x + 4x$

b) Find the value of:  $4^3$

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c) Expand:  $5(6 - y)$

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d) Given that  $h = 3$  and  $k = 7$  find the value of  $2h - k$ .

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(10 marks)

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**END OF PAPER**