

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2010

Directorate for Quality and Standards in Education

Educational Assessment Unit



FORM 4

MATHEMATICS SCHEME D

TIME: 30 minutes

Non-calculator Paper

Name: _____

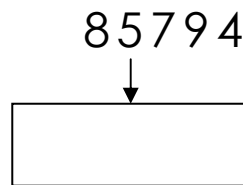
Class: _____

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

Instructions to Candidates

- Answer ALL questions.
- This paper carries a total of 20 marks.
- Calculators and protractors are not allowed.

1. Write down the **value of 5** in this number:



(1 mark)

2. Arrange in order of size, starting with the **smallest**.

1396

1936

169.3

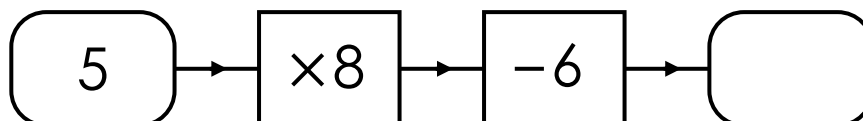
1639

(2 marks)

3. **Subtract:**
- $$\begin{array}{r} 5000 - \\ 3109 \\ \hline \\ \hline \end{array}$$

(2 marks)

4. **Complete** the function machine.



(1 mark)

5. Work out: $\frac{3}{5} \times \text{€}35$

€ _____

(2 marks)

6. Use these numbers to **fill in** the empty spaces.

47 48 49

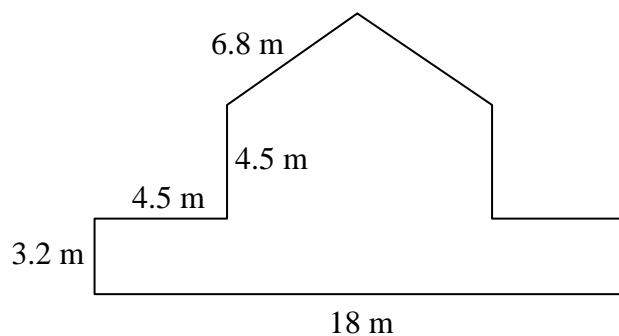
Even number

Square number

Prime number

(3 marks)

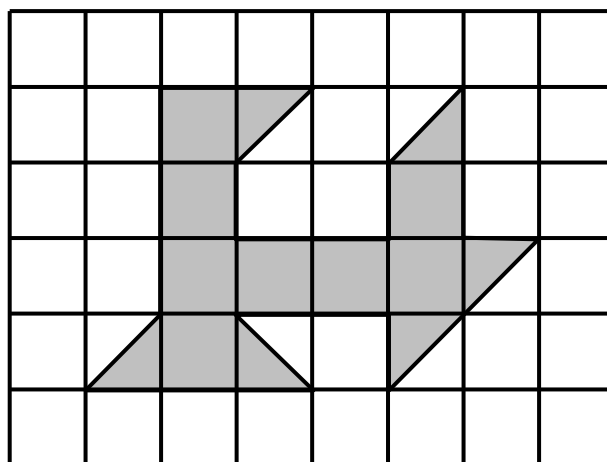
7. This shape is **symmetrical**.
Work out the **perimeter** of this shape.



m

(3 marks)

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



cm²

9. Work out:

a) $29 - 5 \times 4$

b) $(-20) \div 5$

(2 marks)

10. A school bus makes the same trip each day.
In 9 days this school bus covers 441 km.
Work out the length of each trip.



(2 marks)

End of Paper

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2010

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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	13	14	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. a) **Round** the following numbers:

i) 12.455 correct to **2 decimal places**: _____

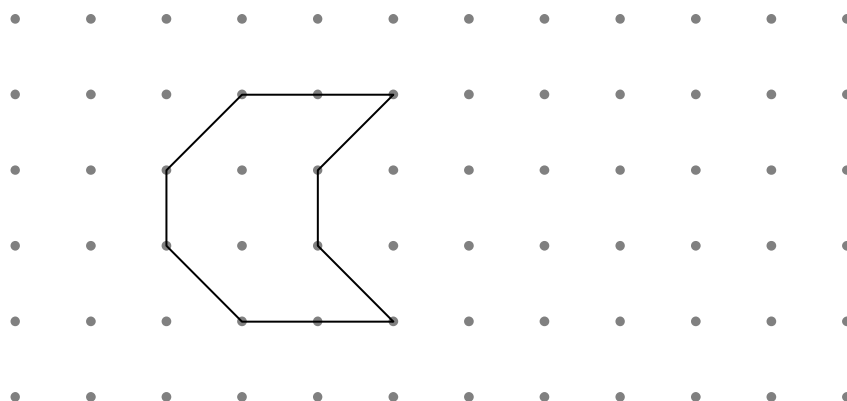
ii) 14193 correct to **nearest ten**: _____

b) Write as an **ordinary number**:

$$7.9 \times 10^4 =$$

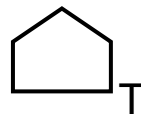
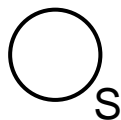
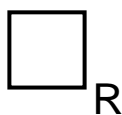
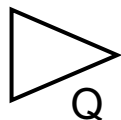
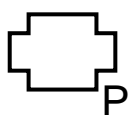
_____ (4 marks)

2. **Tessellate** this shape **2 more times**:



(2 marks)

3. a) Look at these shapes:

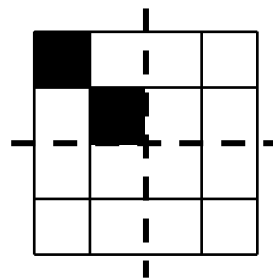


Fill in:

i) Shapes _____ and _____ have **only one line of symmetry**.

ii) Shape _____ has **only two lines of symmetry**.

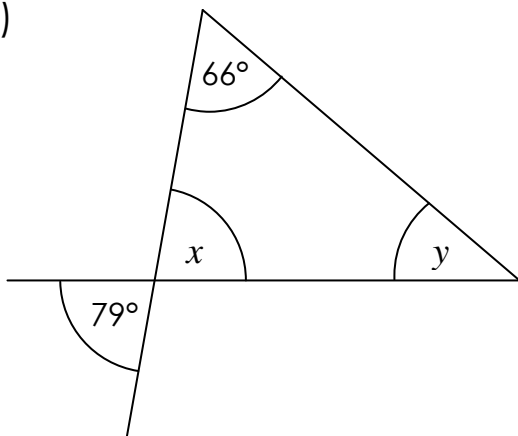
b) The dotted lines are **mirror lines**.
Complete the pattern.



(4 marks)

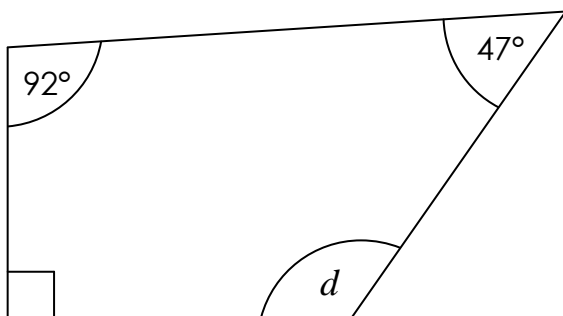
4. Work out the values of the angles marked x , y and d .

a)



$x =$ _____ and $y =$ _____

b)

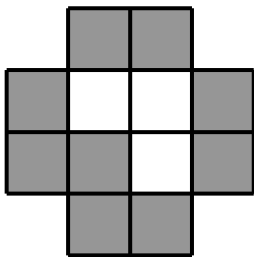


$d =$ _____

Name _____

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5. a) Look at the shape.



i) What **fraction** of the shape is **shaded**?
Give your answer in its **simplest form**.

ii) What **percentage** of the shape is **shaded**?

_____ %

b) Make equivalent fractions:

$$\frac{3}{21} = \frac{\quad}{7}$$

c) Work out:

$$\frac{11}{21} - \frac{1}{7}$$

(8 marks)

6. a) Arrange the following numbers in order **largest first**:

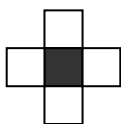
54

54.19

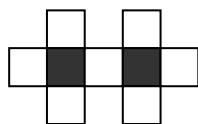
54.9

54.29

b) Look at these patterns:

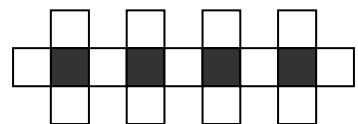


Pattern 1



Pattern 2

Pattern 3



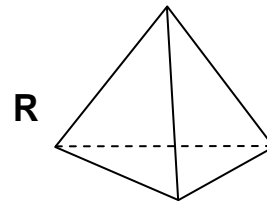
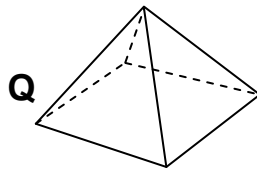
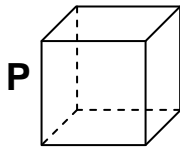
Pattern 4

i) **Draw** Pattern 3.

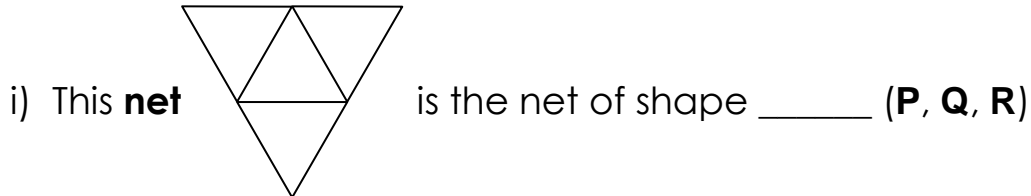
ii) Fill in:

Pattern 6 has _____ **black** squares and _____ **white** squares.

7. a) Look at these shapes.



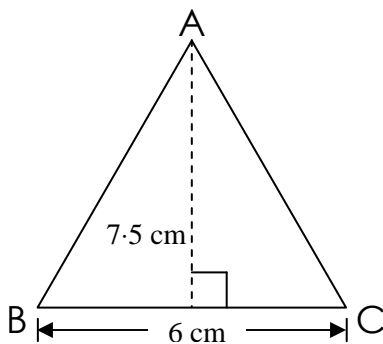
Fill in:



ii) Shape **P** has 12 edges, 8 vertices and _____ **faces**.

b) Work out the **area** of the triangle ABC.

Area of a triangle = $\frac{1}{2}bh$



_____ cm²

(5 marks)

8. Fill in the blanks using the following words.

Each word can be used **only once**.

certain

impossible

likely

unlikely

a) There are 60 minutes in 1 hour. _____

b) My father will give me €1 000 000 tomorrow. _____

c) I am 10 years older than my mother. _____

d) I will score **more than 2** on a dice. _____

9. a) i) **Simplify** $24 : 16$

ii) Margaret and Frank share a 2000 *ml* bottle of water between them in the ratio of $3 : 2$.

Work out how much water each take.

Margaret: _____ *ml*

Frank: _____ *ml*

b) i) A waitress is paid **€150** for **3 weeks** of work.
How much does she receive for **1 week** of work?

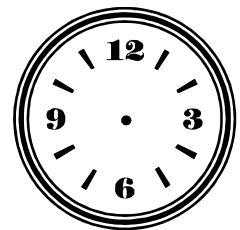
€ _____

ii) How much does she receive for **7 weeks** of work?

€ _____

(10 marks)

10. a) i) Draw the hands of the clock to show 7:15 pm.



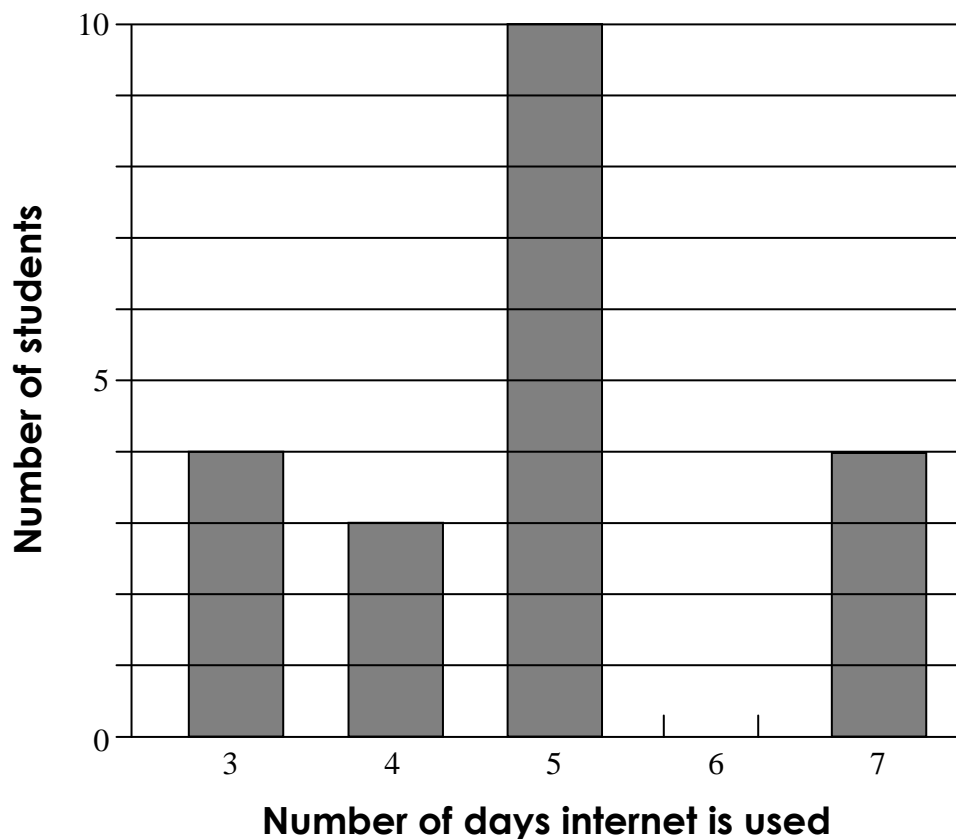
ii) Write 7:15 pm in 24-hour time. _____

b) An aeroplane leaves Malta at 4:30 pm and arrives in Berlin at 7:15 pm.

Work out the length of the flight.

11. The table and the bar graph show the number of days the students in a Form 4 class use the internet during one week.

Number of days internet is used	Number of students
3	4
4	
5	10
6	9
7	4



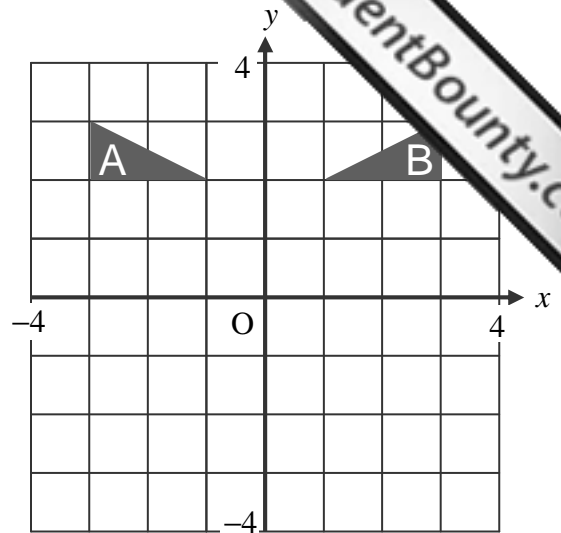
- a) Complete the **table**.
b) Complete the **graph**.

Fill in:

- c) i) The **total number** of students in the class is _____.
ii) There are _____ students who use the internet for more than 5 days in a week.

12. a) Fill in:
Shape **B** is a _____
(translation, reflection, rotation)
of Shape A.

- b) Translate Shape **B** 3 units to the
left and 5 units down.



(4 marks)

13. a) Simplify: $5a - 9b - 2a + 2b + 4a + 3c + 6c$

- b) Find the value of y : $5y + 12 = 47$

- c) If $p = 3$ and $q = 4$ find the value of: $7p - 3q$

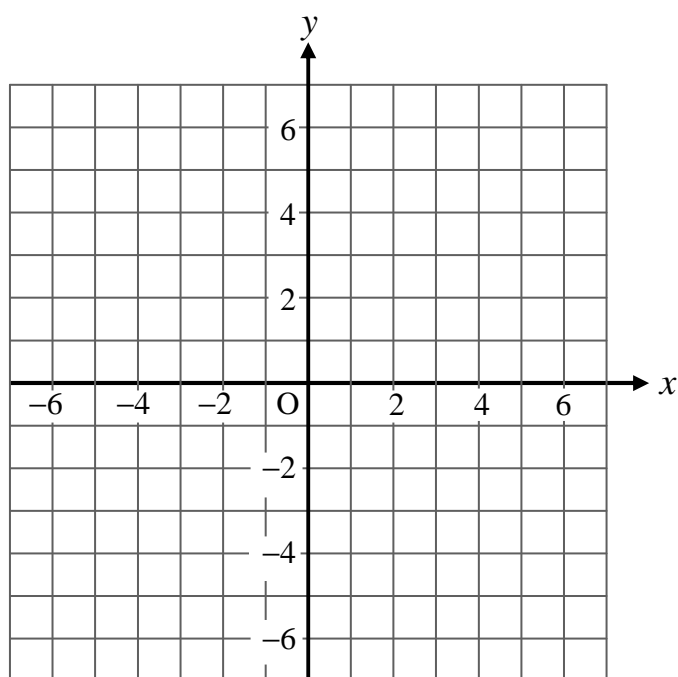
- d) Expand: $4(3m - 7)$

(10 marks)

14. a) Fill in the table for the graph $y = x + 2$.

x	-6	1	4
+2	+2	+2	
$y = x + 2$	-4		6

b) Use your table to plot the graph $y = x + 2$ on the grid.



c) Use your graph to fill in:

i) When $x = -2$, $y = \underline{\hspace{2cm}}$

ii) When $y = 4$, $x = \underline{\hspace{2cm}}$

(6 marks)

End of Paper