SECONDARY SCHOOL ANNUAL EXAMINATIONS 2011
Directorate for Quality and Standards in Education
Educational Assessment Unit

FORM 5   **MATHEMATICS SCHEME D**   **TIME: 20 minutes**
Non Calculator Paper

1	2	3	4	5	6	7	8	9	10	Total

Name: _____   **Class:** _____

INSTRUCTIONS TO CANDIDATES

- **Answer all questions.**

- **This paper carries a total of 20 marks.**

- **Calculators and protractors are not allowed.**

1   **Underline** the correct day of the week.

28th **August 2012** will be a

September 2012

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Monday

Tuesday

Wednesday

Thursday

(1 mark)

2   a)   **Complete** the table.

Freezer temperature	Room temperature	Difference
−12 °C	18 °C	

b)   The temperature of the freezer **goes down** by 5ºC.

New temperature in freezer = _____ ºC.
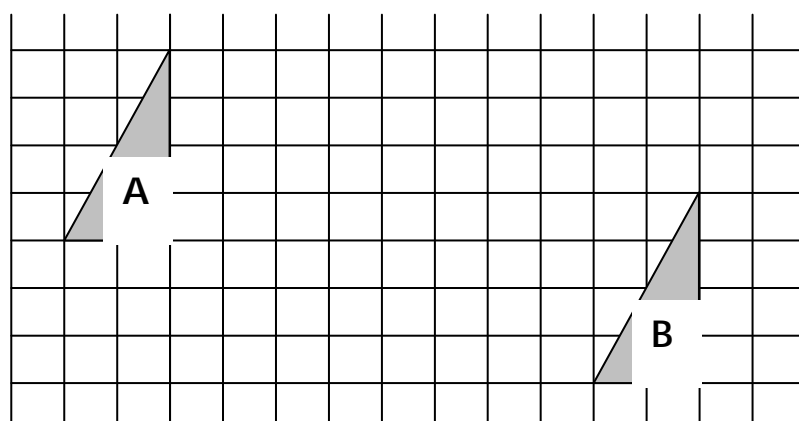
(2 marks)

3   On the number line **mark** the fractions $\dfrac{2}{5}$ and $\dfrac{7}{10}$.


0   1

$\dfrac{3}{10}$

(2 marks)

4   a)   **Simplify** the following expression.

2*s* – 3*w* + *s* – 4*w* = _____

b)   Find the **value** of the expression when *s* = 6 and *w* = 2.

_____

(2 marks)

5

Film starts   Film ends

Fill in:

a)   The film **starts** at **quarter to** 9 and **ends** at _____ _____ 10.

b)   The film is _____ **hours** long.

(2 marks)

6   Alan sat for 5 mathematics tests. These are his marks.

76   52   85   64   70

a)   **Median** mark = _____

b)   **Range** = _____

(2 marks)

7   Work out the **value of the angle marked** *x*.
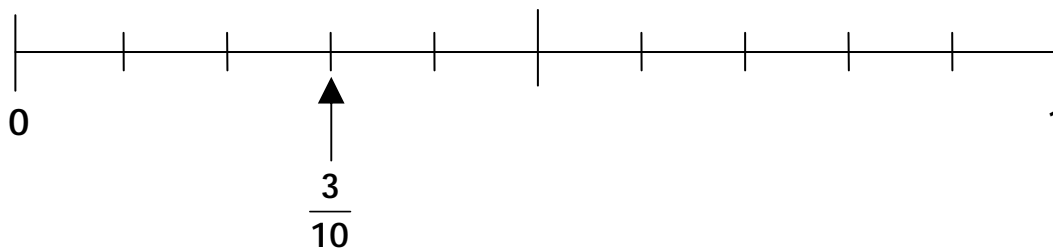
Angle *x* = _____ °

(2 marks)

8

Underline the correct words.

Triangle **B** is a (**translation, reflection, rotation**) of triangle **A** by **moving** ten squares (**right, left**) and (**two, three, four**) squares down.

(2 marks)

9 This is a **pattern** made up using balls.

Pattern 1   Pattern 2   Pattern 3   Pattern 4
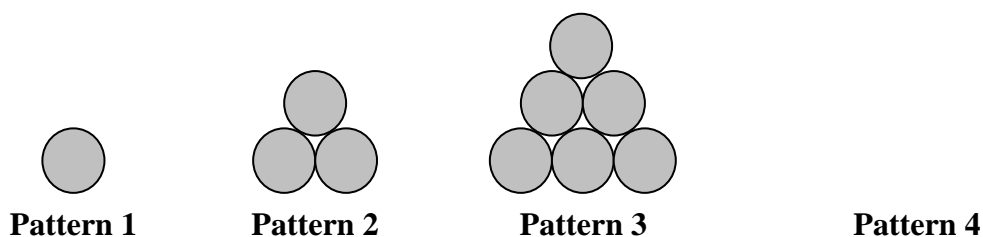
a) **Draw** the **next pattern**.

b) _____ balls are needed to draw **Pattern 6**.

(2 marks)

10 **Match** correctly the values of column A with those of column B. The first one is done for you.

A   B

$\frac{3}{4} \times 20$		8
$6 + 2 \times 4$		10
25% of 40		15
2^3		14

(3 marks)

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D

FORM 5	MATHEMATICS SCHEME D	TIME: 1h 40min
	Main Paper	

1	2	3	4	5	6	7	8	9	10	11	12	13	NC	Main	Total

Name: _____   **Class:** _____

> **Calculators are allowed but the necessary working must be shown.**
> **Answer all questions.**

1   Fill in:

a)   64 kg = _____ grams

b)   9 minutes = _____ seconds

c)   _____ km = 3000 metres

(3 marks)

2   Complete the **LOGO** statement to draw the letter **H**

PD

FD 200 BK _____ RT 90

FD 75 LT _____

FD 100 BK _____

PU HOME

(3 marks)

3   20   21   22   23   24   25   26   27   28

Use the given set of numbers above and **choose**:

a)   the **smallest odd** number   _____

b)   the **largest even** number   _____

c)   a **square** number   _____

d)   a **prime** number   _____

e)   a **multiple of 9**   _____

_____ (5 marks)

4   a)   **Fill in**.

$$20\% = \frac{\boxed{}}{100} = \frac{1}{\boxed{}}$$

b)   **Fill in**:

20% of €45 = €_____

c)   Work out **80%** of **€45**.

€_____

(6 marks)
_____

Name _____   **Class** _____ **D**

5   The diagram shows the angles of a **quadrilateral**.

95°

h

80°

g   65°
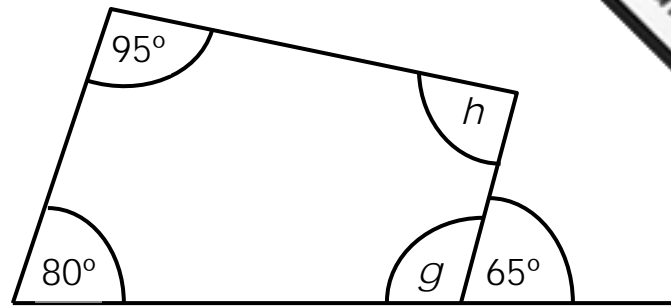
a)   **Fill in:** g = _____^{o}.

b)   The angles on a **straight line** add up to _____^{o}.

c)   **Fill in**: h = _____^{o}.

d)   The **sum of the angles** in a quadrilateral is _____^{o}.

(6 marks)

6   An aeroplane leaves Malta at **11.45 a.m.**
The trip to Milan takes **2½** hours.
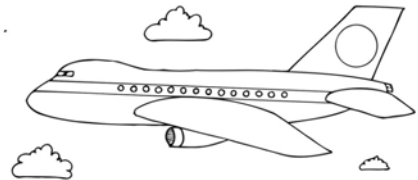
a)   **Fill in**:

i)   The trip takes _____ **minutes**.

ii)   The aeroplane arrives in Milan at _____ **p.m.**

b)   Write the **arrival time** using the **24-hour clock**.

Arrival time = _____ : _____

(6 marks)

7   A car costs **€9600**.

Maria pays **half** the cost as **deposit**.

€9600

a)   **Deposit** = €_____

b)   She pays **€150** every month for **3 years**.

  i)   **Fill in**: There are _____ **months** in 3 years.

  ii)   Work out the **total amount** of the **monthly payments**.

       Total amount = €_____

  iii)   How much does it cost Maria to buy the car?

       €_____

                                                                                    (8 marks)

8   a)   **Simplify** the following ratios.

  i)   150 g : 900 g   ii)   80 cm : 4 m

  b)   John and Andrew have 180 marbles **altogether**. The ratio of marbles **John : Andrew = 2 : 3**. Work out the **number of marbles** that John and Andrew have.

                              John has _____ marbles

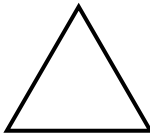   Andrew has _____ marbles

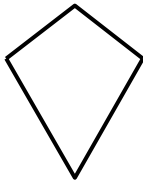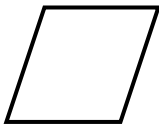   (8 marks)

9 The graph shows points plotted for the equation **y = 3x − 2**.

a) On the graph **draw** a line through the given points.

b) When $x = 2$, $y = $ _____.

c) When $y = -5$, $x = $ _____.

d) (_____ , _____) is **another** coordinate of a point which is on the line.
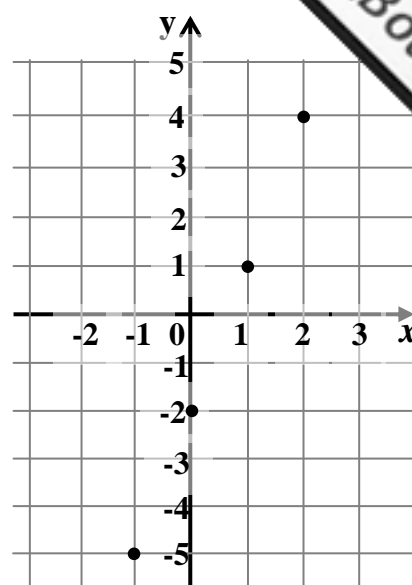
(6 marks)

10 **Underline** the correct **number** for the properties of each shape.
The first one is done for you.

SHAPE	NAME	LINES OF SYMMETRY	SUM OF INTERIOR ANGLES	NUMBER OF DIAGONALS
	RECTANGLE	(0, 1, **2**, 3)	(180 °, **360 °**, 540 °)	(0, 1, **2**, 3, 4)
	EQUILATERAL TRIANGLE	(0, 1, 2, 3)	(180 °, 360 °, 540 °)	(0, 1, 2, 3, 4)
	ISOSCELES TRIANGLE	(0, 1, 2, 3)	(180 °, 360 °, 540 °)	(0, 1, 2, 3, 4)
	KITE	(0, 1, 2, 3)	(180 °, 360 °, 540 °)	(0, 1, 2, 3, 4)
	RHOMBUS	(0, 1, 2, 3)	(180 °, 360 °, 540 °)	(0, 1, 2, 3, 4)

(6 marks)

11 The diagram below shows a rectangular swimming area. The **swi...**
pool is in the form of a **circle**.
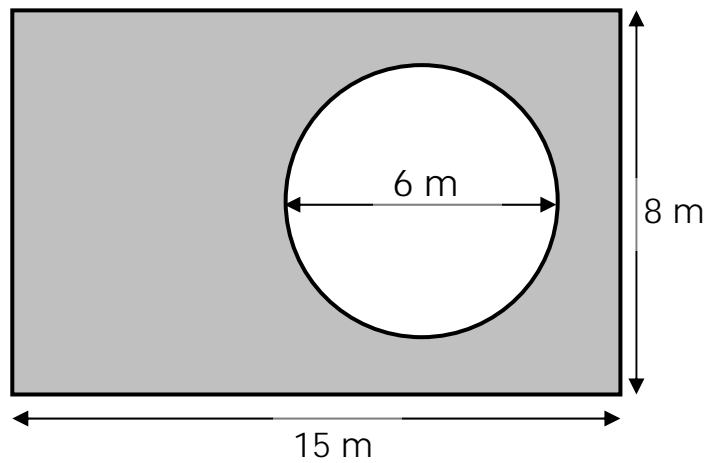
a) The **radius** of the circle is _____ m.

b) Use $A = \pi r^2$ to work out the **area** of the swimming pool correct to
the nearest m².

Area of swimming pool = _____ m²

c) Work out the **area** of the **rectangular swimming area**.

Rectangular area = _____ m²

d) Work out the **shaded** area correct to the nearest m².

Shaded area = _____ m²

(8 marks)

12 Some students were asked to name a **country** that they woul[d] visit. The following are the responses given.

Spain	Italy	Germany	Italy	England
England	Germany	England	Spain	Italy
Italy	Italy	Germany	England	Italy
France	Spain	Spain	Italy	England

a) **Complete** the **frequency table**.

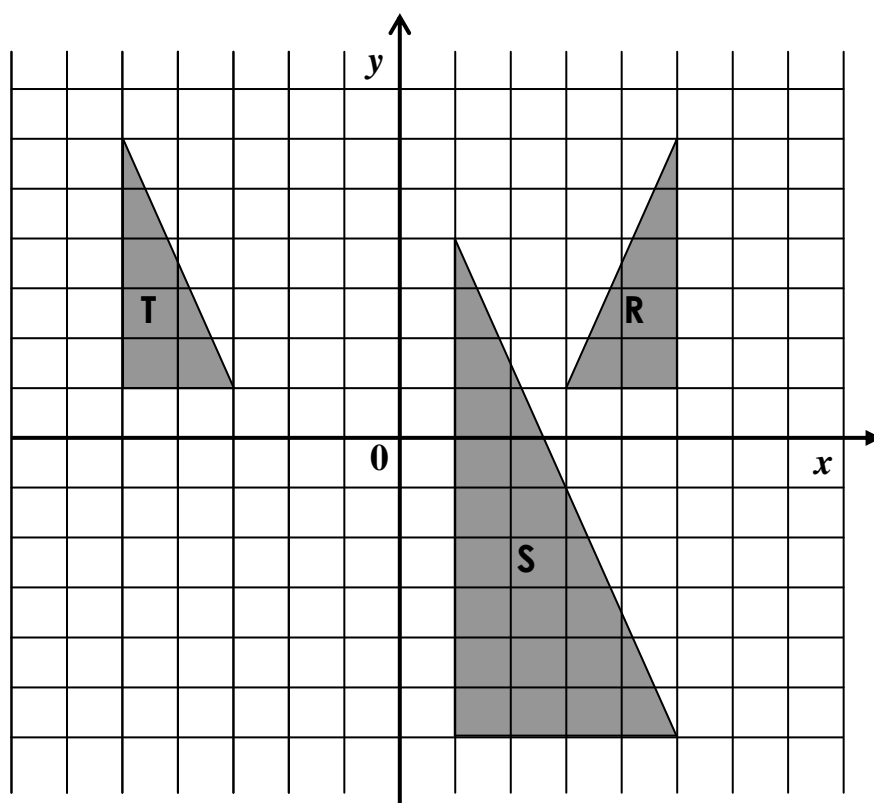| Country	Frequency
Spain	4
Italy	
Germany	
England	
France	
Total number of students	

b) **Complete** the bar chart.
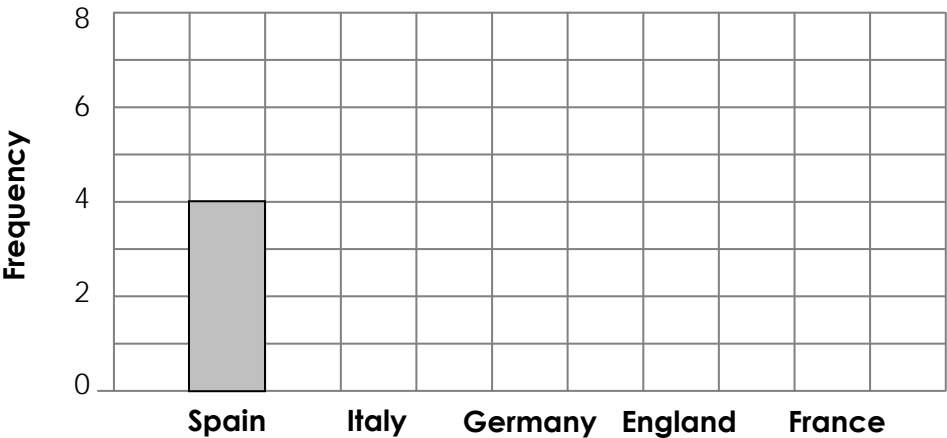
c) A student is chosen at random. Write down the probability that the student chooses **Spain.** (Write your answer as a **fraction** in its **lowest terms**).

_____

(11 marks)

13 The diagram shows transformations on **triangle T**.

a) **Fill in**:

    i) Triangle **R** is a _____ of triangle **T** in the **y axis**.

    ii) Triangle **S** is an **enlargement** of triangle **T** by **scale factor** _____.

b)   Triangle **T** is **reflected** in the **x axis**.

    Draw the new triangle on the diagram.

(4 marks)

END OF PAPER