Name: $\qquad$ Class: $\qquad$

Mark

## Instructions to Candidates

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

1. a) Write in ascending order (smallest first):
15.3
13.5
0.153
1.53
b) Write in figures:

Twenty five thousand, seven hundred and forty three
c) Round your answer in b) to the nearest hundred.
2. Write the next number:
a) $51,45,39,33$, $\qquad$
b) 1, 4, 9, 16, $\qquad$
3.


Fill in:
$\mathbf{w}=$ $\qquad$ ${ }^{\circ}$
$\qquad$
4. Reflect the triangle in the $\mathbf{y}$-axis.

5. The following are temperatures in degree Celsius $\left({ }^{\circ} \mathrm{C}\right)$.

$$
20,22,23,21,18,19,17
$$

Work out the range of the temperatures.
$\qquad$ ${ }^{\circ} \mathrm{C}$
6. During a sale, a shop gives a $\mathbf{7 5 \%}$ discount on all items.

b) Work out the discount on a shirt costing $€ \mathbf{£ 2 0}$.
7. Brenda buys $\mathbf{8}$ pens each costing $\mathbf{5 5}$ cent.
a) How much do the pens cost altogether?
$€$ $\qquad$
b) She pays with a $€ 5$ note.

How much change does she get?


Change $=€$ $\qquad$
8. a) Expand

$$
5(3 x+4)=
$$

$\qquad$
b) For the given triangle, write a formula for the sum of its interior angles.

$x=$ $\qquad$
9. The area of this rectangle is $21 \mathrm{~cm}^{2}$. Work out:
a) the width of the rectangle


Width = $\qquad$ cm
b) the perimeter of the rectangle.

Perimeter $=$ $\qquad$ cm
10. Maria throws a 6 sided dice.

The probability that Maria gets an odd number is:
A) 0
B) 1
C) $1 / 2$
D) $1 / 4$

## END OF PAPER

DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Department for Curriculum Management and eLearning
Educational Assessment Unit
Annual Examinations for Secondary Schools 2012

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

| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Main | Non <br> Calculator | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
|  | Mark |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Name: $\qquad$ Class: $\qquad$

## Instructions to Candidates

- Answer ALL questions.
- This paper carries a total of $\mathbf{8 0}$ marks.
- Calculators are allowed. Show all necessary working.

$$
\text { 1. a) Give a rough estimate of } \frac{(32.1+19.5)}{5.3}
$$

$\qquad$
b) i) Use your calculator to work out $\frac{(32.1+19.5)}{5.3}=$ $\qquad$
ii) Give the answer correct to 2 decimal places. $\qquad$
iii) Give the answer correct to the nearest whole number. $\qquad$
2. The number line below shows the correct position of the fractions

a) Write down a fraction that is equal to $\frac{7}{10}$.
b) Reduce $\frac{4}{10}$ as a fraction in its lowest terms.
c) Find a fraction between $\frac{4}{10}$ and $\frac{7}{10}$.
d) Mark $\frac{4}{5}$ with an arrow on the number line given.
3. A restaurant owner uses the following square tables to seat people.


Seating 1


Seating 2


Seating 3
a) Fill in the table below.

| Seating | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| People | 4 | 6 |  |  | 12 |

b) Each time the owner adds a table, he can seat $\qquad$ more people.
c) How many tables would be needed to seat 16 people?
$\qquad$
4. The graph changes Pound Sterling (£) to Euro ( $\boldsymbol{€}$ ).

Pound Sterling
(£)

a) Use the graph to complete the following:
i) $\mathbf{£} 1$ is equivalent to $\boldsymbol{€}$ $\qquad$
ii) $\quad \in 3$ is equivalent to $\mathbf{£}$ $\qquad$
b) Alex changes $\mathbf{£ 2 0 0}$ to Euro $(\boldsymbol{\epsilon})$. Work out his amount in Euro $(\boldsymbol{\epsilon})$.
5. Water flows from a pipe at a rate of $\mathbf{3 0}$ litres in $\mathbf{1 0}$ minutes.
a) Fill in:
i) 30 litres $=$ $\qquad$ ml
ii) 10 minutes $=$ $\qquad$ seconds
b) Work out the amount of water in ml that flows out per second.
$\qquad$
6. Tourists can take a bus from Malta International Airport (MIA) to
ferry in Cirkewwa. The timetable below shows times when buses leave the a

| LEAVING FROM MIA |  | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunda |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 |  |  |  |  | 11:30 |  |  |
|  | 2 | 12:30 | 12:40 | 12:25 | 12:35 | 12:25 |  |  |
|  | 3 | 13:30 | 13:30 | 13:15 | 13:30 |  | 13:30 | 13:30 |
|  | 4 |  |  |  |  | 15:00 | 15:25 | 14:55 |
|  | 5 | 16:10 | 16:20 | 16:00 | 16:05 | 16:00 | 16:30 | 16:00 |
|  | 6 | 18:00 | 18:00 | 18:15 | 18:00 | 18:15 | 18:30 | 18:20 |
|  | 7 |  |  |  |  |  | 19:30 |  |
|  | 8 |  |  |  |  |  |  | 20:35 |
|  | 9 |  |  |  | 22:25 | 22:30 |  | 22:30 |

Use the timetable to fill in the following:
a) Trip $\mathbf{1}$ is only available on a $\qquad$ at $\qquad$ .
b) Trip numbers $\qquad$ and $\qquad$ run everyday of the week.
c) On weekends, the earliest trip is at $\qquad$ .
d) On a Tuesday, trip 3 leaves $\qquad$ minutes after trip 2.
e) Trip 9 leaves $\mathbf{4}$ hours $\mathbf{2 5}$ minutes after trip 6 on a $\qquad$ .
7. Complete the following number machines:
a)

c)


Name: $\qquad$ Class: $\square$ 16 marks) (
D)
8. Figure A shows a tent.

The tent's entrance is in the form of a triangle (figure B).


Figure A


Figure B
a) Use figure $B$ to work out the area of the entrance.
$\qquad$ $m^{2}$
b) Given that the tent is $\mathbf{5} \mathbf{~ m}$ long, work out its volume.

Use the formula Volume $=$ area $\times$ length.

> Volume =
$\qquad$ $\mathrm{m}^{3}$
9. a) Solve the following equations:
i) $4 x=22$
$x=$ $\qquad$
ii) $x+5=6$
$x=$ $\qquad$
iii) $\frac{x}{2}=10$

$$
x=
$$

$\qquad$
b) The cost of $\mathbf{2}$ soft drinks and a toast is $€ 2.45$.

A soft drink costs 75 cent. Work out:
i) The cost of the $\mathbf{2}$ soft drinks

ii) The cost of the toast
10. The figure shows a regular pentagon.
a) Work out the sum of the interior angles ( $\mathbf{S}$ ) of the pentagon. Use the formula $S=180(n-2)$.
b) Find the size of angle $y$.

$y=$ $\qquad$ ${ }^{\circ}$
c) Underline the correct one.

The sum of the exterior angles of the pentagon is $\left(180^{\circ}, 360^{\circ}, 540^{\circ}\right)$.
d) Hence work out the size of one exterior angle.

Exterior angle $=$ $\qquad$。
e) Fill in the LOGO commands below to draw a regular pentagon.

PD
REPEAT $\qquad$ [FD 100 RT $\qquad$ ]
11. The following are nets of different shapes.


A


B


C


D
a) Fill in:
i) Figure $\qquad$ shows the net of a cube.
ii) Figure $\mathbf{B}$ is the net of $a$ $\qquad$ .
iii) The net of a pentagonal prism is figure $\qquad$ .
iv) Figure $\qquad$ is the net of a pyramid.
b) Complete the table below:

| Shape |  | Faces | Edges |
| :--- | :---: | :---: | :---: |

12. Mary did a survey on TV programmes. The responses of 12 of her classmates are given below.

| Film | News | Film | Documentary | Sports | Quiz |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Film | Film | Quiz | Documentary | News | News |

a) Fill in the empty cells in the following table.

| TV PROGRAMME | TALLY | FREQUENCY |
| :---: | :---: | :---: |
| Film |  |  |
| Quiz |  |  |
| News | III | 3 |
| Documentary |  | 1 |
| Sports |  | 12 Students |
| TOTAL | 册 胙 II |  |

b) Fill in the table to calculate the angle represented by each programme. The first one is done for you.

| TV Programme | Working | Angle in Pie Chart |
| :---: | :---: | :---: |
| Film | $\left(360^{\circ} \div 12\right) \times 4=$ | $120^{\circ}$ |
| Quiz |  |  |
| News |  |  |
| Documentary |  |  |
| Sports |  |  |

c) The most favourite TV programme is $\qquad$ .
d) Now draw the pie chart in the circle.
e) In the school Mary attends there are 400 students. How many students would prefer to watch the news?

13.


Fill in the following:
a) Shape $\mathbf{A}$ is translated to $\mathbf{C}$ by $\qquad$ squares to the left and 7 squares $\qquad$ .
b) Shape $\qquad$ is an enlargement of $\mathbf{A}$ by scale factor $\qquad$ .
c) Shape $\qquad$ is a rotation of $\mathbf{A}$ by $90^{\circ}$ clockwise.

