



FORM 3

MATHEMATICS

TIME: 1 hr 30 min.

Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Main	NC	Global Mark
Mark																	

DO NOT WRITE ABOVE THIS LINE

Name: _____

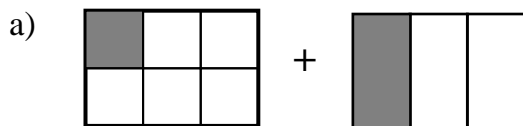
Class: _____

INSTRUCTIONS TO CANDIDATES:

Read all the questions carefully before you start answering.

- Answer all questions.
- This paper carries 75 marks.
- Calculators and mathematical instruments are allowed but all necessary working must be shown.

1. Work out the following and give your answers in the simplest form.



Ans: _____

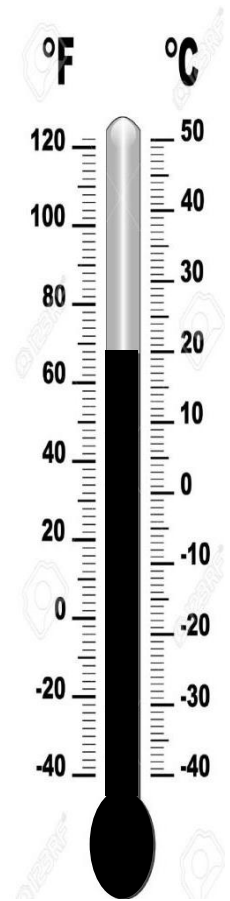
b) $\frac{3}{5} - \frac{3}{10}$

Ans: _____

(4 marks)

2. a) The temperature in °C is _____.

b) The temperature in °F is _____.

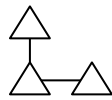


(2 marks)

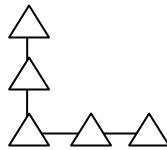
3.



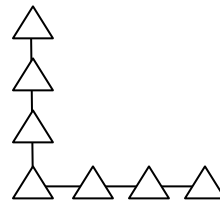
Shape 1



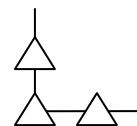
Shape 2



Shape 3



Shape 4

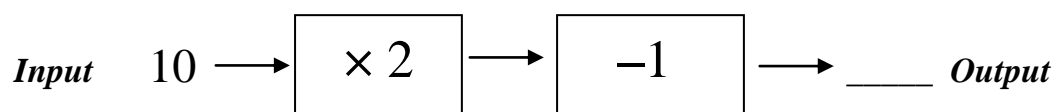


Shape 5

a) Complete **Shape 5** in the space provided.

b) Shape 7 has _____ triangles.

c) **Complete** this function machine which gives the number of triangles in **Shape 10**.



(6 marks)

4. The table shows the time Mario takes to walk between three places in Malta.

	Naxxar	Mdina	Gudja
Naxxar		2 hours	4 hours
Mdina	2 hours		3 hours
Gudja	4 hours	3 hours	

a) The **time** taken to walk between:

i) Naxxar and Mdina is _____ hours.

ii) Gudja and _____ is 3 hours.



b) Mario walks at 6 km per hour.

What is the **distance** he travels between Mdina to Naxxar **and back**?

Ans: _____ km

(5 marks)

5. Draw lines to match the following:

TIME

LITRES

VOLUME

METRES

WEIGHT

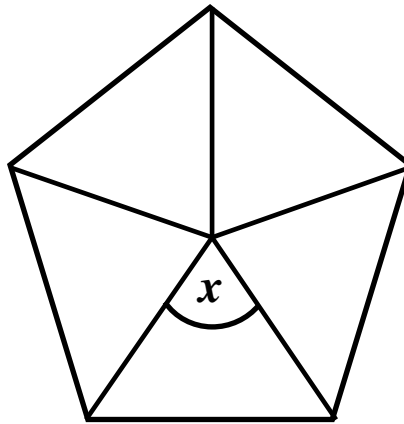
GRAMS

DISTANCE

MINUTES

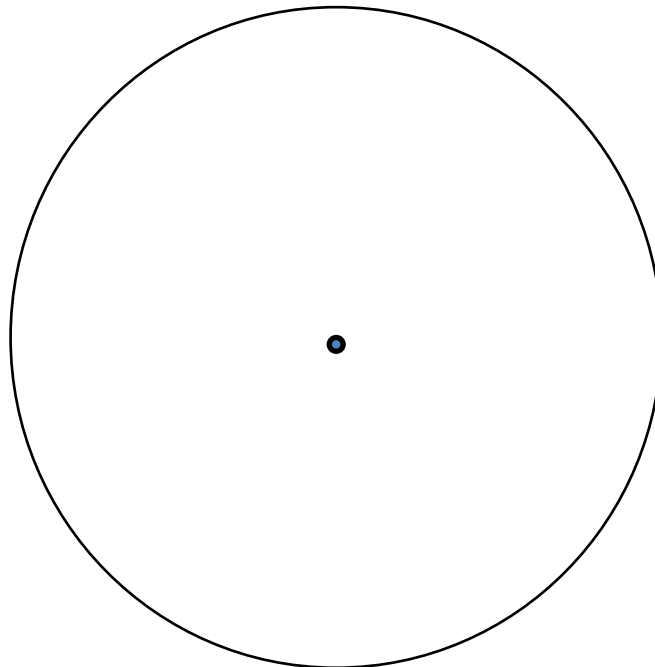
(4 marks)

6. The diagram shows a regular pentagon.
a) Work out the size of angle x .



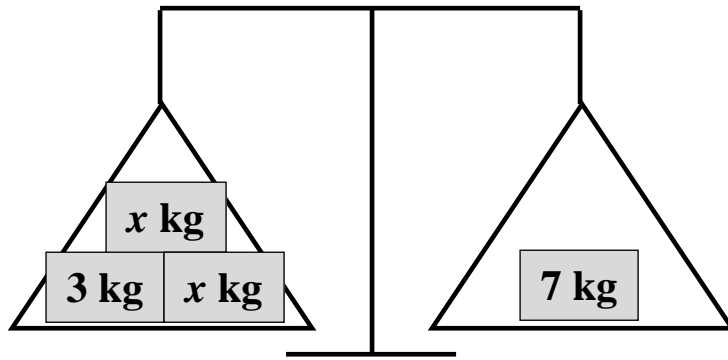
Ans: _____[°]

- b) Use your protractor to draw a regular octagon (**8 sides**) inside the circle.



(6 marks)

7. a) Calculate the value of x .



$x =$ _____

b) Solve these equations.

i) $a - 9 = 5$

ii) $4b = 24$

iii) $2c - 3 = 15$

$a =$ _____

$b =$ _____

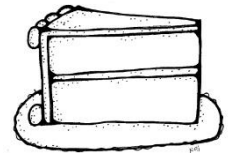
$c =$ _____

(6 marks)

8. a) **40%** of Crispy Cake is sugar.

i) In 100 g of Crispy Cake, there is _____ g sugar.

ii) How much sugar is there in 250 g of Crispy Cake?



Ans: _____ g

b) Charlene weighs 90 kg. She **loses** 10% of her weight.

i) Work out 10% of 90 kg.

Ans: _____ kg

ii) What is Charlene's weight after the weight loss?

Ans: _____ kg

(8 marks)

9. These are the marks obtained by eleven students in a test.

11 12 17 23 41 48 60 60 60 65 76

a) The **median** mark is _____.

b) Work out the **mean** mark.

Ans: _____

c) The **mode** is _____.

d) Work out the **range**.

Ans: _____

e) Jeremy obtained a mark of 60 in the test.
Give a reason to explain that this is a good mark.

(8 marks)

10. a) Simplify the expression: $9a + 3b - 2a + 5b$

Ans: _____

b) Factorise the expression: $9x + 3y$

Ans: _____

c) Work out the value of $3x + 5y - 3z$ given that $x = 2$, $y = 3$ and $z = 4$.

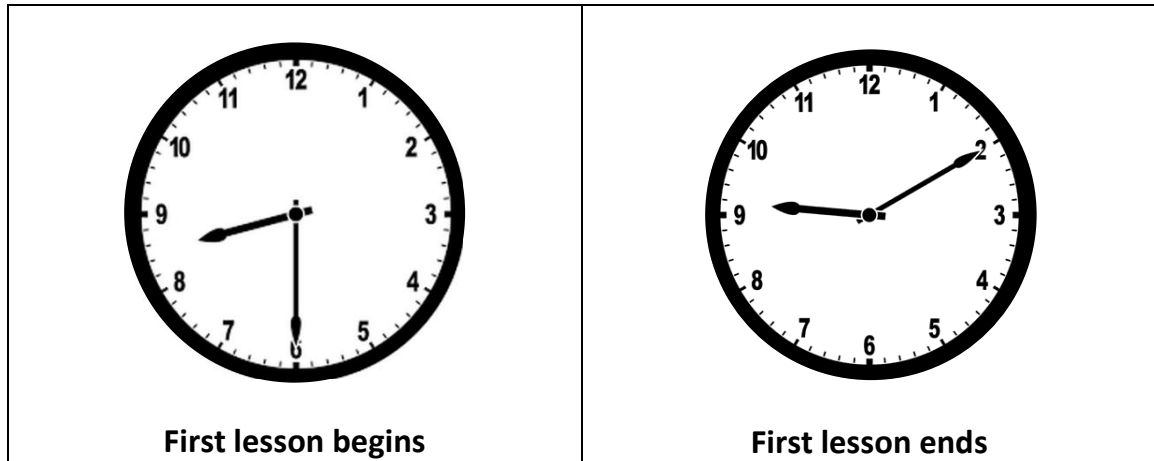
Ans: _____

d) Expand $3(2x - 4y)$

Ans: _____

(8 marks)

11.



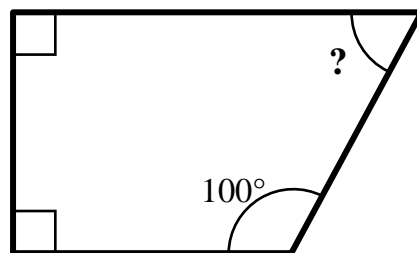
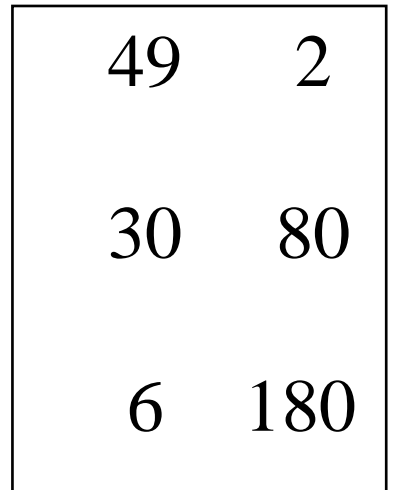
Fill in.

- a) The first lesson begins at _____ past _____ .
- b) The first lesson is _____ minutes long.

(3 marks)

12. Choose the correct numbers from the box to complete the following:





- a) 25 correct to the nearest 10 is _____.
- b) A square number between 45 and 55 is _____.
- c) The length of a door is about _____ m.
- d) The angles of a triangle add up to _____ °.
- e) A hexagon is a shape with _____ sides.
- f) The missing angle in the diagram below is _____ °.



(6 marks)

13. Use the numbers below to fill in the blanks.

2355 m $-8\text{ }^{\circ}\text{C}$ $200\text{ }^{\circ}\text{C}$ -5 m

 <p>Temperature</p> <p>_____</p>	 <p>Height</p> <p>_____</p>	 <p>Height</p> <p>_____</p>	 <p>Temperature</p> <p>_____</p>
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(4 marks)

14. a) Kaya has €50 in her bank account. After her birthday party, she adds €20. She draws €100 to buy a mobile phone. What is the new balance?

Ans: € _____

- b) Kevin is in a lift at Level -4 . He has to reach Level **8**. How many floors does the lift have to travel upwards?

Ans: _____ floors

(5 marks)

END OF EXAM