



St. Nicholas College  
Boys Secondary Naxxar

**BS**  
*Naxxar*

Half-Yearly Examinations  
February 2014

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**FORM 3**

**MATHEMATICS TRACK 2**  
**Non-Calculator Paper**

**TIME: 30 mins**

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Question	1	2	3	4	5	6	7	8	9	10	11	TOTAL
Mark												

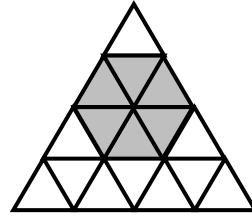
Name: \_\_\_\_\_

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

### **INSTRUCTIONS TO CANDIDATES**

- **Answer all questions.**
- **This paper carries 25 marks.**
- **Calculators and protractors are not allowed.**

1. (a) What fraction of this shape is shaded?  
Give your answer in its lowest terms.



Ans. \_\_\_\_\_

- (b) Work out this multiplication giving answer in its simplest form.

$$\frac{2}{5} \times \frac{10}{16} =$$

Ans. \_\_\_\_\_

(3 marks)

2. The temperatures of three food cabinets in a shop are  $2^{\circ}\text{C}$ ,  $-5^{\circ}\text{C}$  and  $-1^{\circ}\text{C}$ .

- (a) Write down these temperatures in order with the coldest first.

Ans. \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- (b) What is the difference in temperature between the coldest and the warmest cabinet?

Ans. \_\_\_\_\_ $^{\circ}\text{C}$

(3 marks)

3. (a) The attendance at an athletics meeting was 8492.  
Round 8492 to the nearest 100.

Ans. \_\_\_\_\_

- (b) Round the sum of  $\text{€}4358.67$  to the nearest  $\text{€}10$ .

Ans.  $\text{€}$  \_\_\_\_\_

- (c) Round 267.89871 to 2 decimal places.

Ans. \_\_\_\_\_

(3 marks)

4.  $4p$  is **not** the same as

(a)  $p + 4$

(b)  $p \times 4$

(c)  $2p \times 2$

(d)  $2p + 2p$

Ans. \_\_\_\_\_

(1 mark)

5. A rough estimate for  $39 \times 21 \div 194$  is:  
(a) 40            (b) 4000            (c) 4            (d) 400

Ans. \_\_\_\_\_

(1 mark)

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6. The heights of five boys are 124 cm, 130 cm, 128 cm, 132 cm and 119 cm.  
Find the range of these heights.

Ans. \_\_\_\_\_

(2 mark)

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7. A company employs 80 workers. Next year it must reduce its staff by 5%.  
How many workers will there be next year?

Ans. \_\_\_\_\_

(2 marks)

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8. (a) Work out  $\frac{5}{6} - \frac{1}{2}$ . **Give your answer in its lowest terms.**

Ans. \_\_\_\_\_

- (b) Find  $\frac{4}{5}$  of 325 metres.

Ans. \_\_\_\_\_ m

(2 marks)

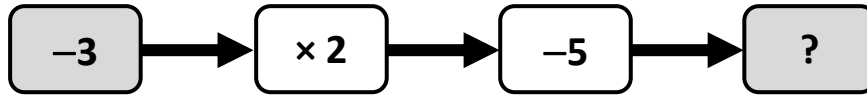
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9. (a) Fill in the missing numbers:

(i)  $2 + (-6) = \square$

(ii)  $(-8) \times \square = -24$

(b) This is a function machine. Use it to find the output number when the input is  $-3$ .



Ans. \_\_\_\_\_

(3 marks)

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10. (a) Simplify  $9x - 5y + 3z - 4x - 6y - z$

Ans. \_\_\_\_\_

(b) **Expand:**  $4(3x - 5)$

Ans. \_\_\_\_\_

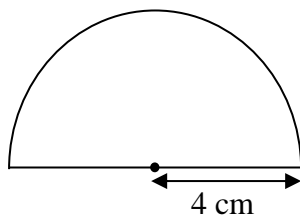
(c) **Factorise completely:**  $18y - 27z$

Ans. \_\_\_\_\_

(3 marks)

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11. Find the area of the semicircle of radius 4 cm. Take  $\pi$  to be 3.



Ans. \_\_\_\_\_  $\text{cm}^2$

(2 marks)

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**END OF PAPER**