



**STELLA MARIS COLLEGE GZIRA**

**MID-YEARLY EXAMINATIONS 2014**

**FORM 2**

**MATHEMATICS NON CALCULATOR PAPER**

**Time: 1 hour**

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***Instructions***

*This paper carries a total of 50 marks*

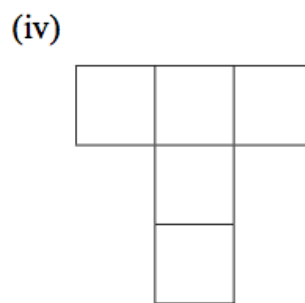
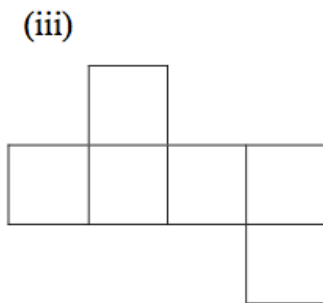
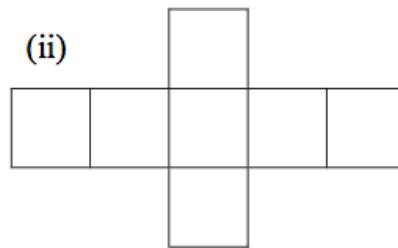
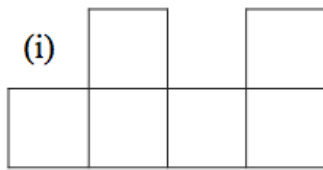
*Answer ALL questions*

*Show all your working*

*The use of non- programmable calculator is **NOT** allowed*

**Name:** \_\_\_\_\_ **Class:** \_\_\_\_\_

1. Which of the following net is a cube?



Answer: \_\_\_\_\_

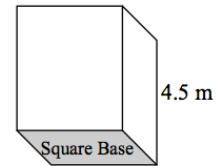
*(1 mark)*

2. Arrange the following in ascending order:

$\frac{1}{8}$     11%     $\frac{3}{20}$     0.32    7%     $\frac{5}{6}$

*(2 marks)*

3. This cuboid has a **square base** of  $9\text{m}^2$ .



a) How long are the sides of the base?

*(1 mark)*

b) Find the volume of the cuboid.

*(1 mark)*

c) Convert the volume of the cuboid in  $\text{cm}^3$ .

*(1 mark)*

d) Find the surface area of this cuboid in  $\text{m}^2$ .

*(3 marks)*

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4. A builder has  $72\text{kg}$  of sand.

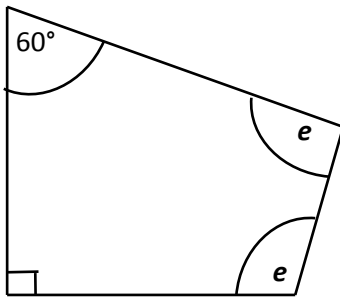
a) Write  $72\text{kg}$  in grams. Give your answer in standard form.

*(2 marks)*

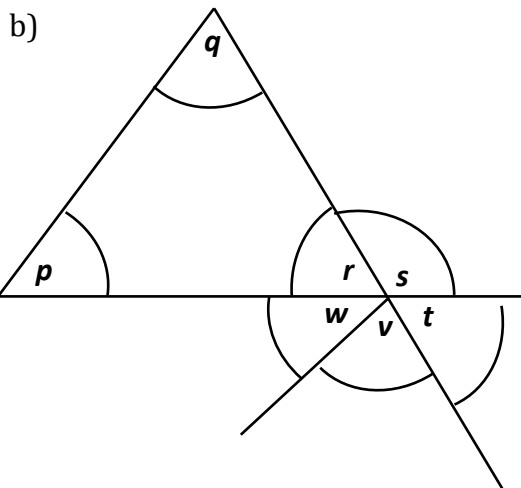
b) One grain of this sand weighs  $0.006\text{g}$ . Find the approximate number of grains in  $72\text{kg}$  of sand and hence give your answer in standard form.

*(2 marks)*

5. a) Find the size of one of the angles marked with *e*.



(2 marks)



Fill in each space with a letter

- i)  $r + \underline{\quad} + \underline{\quad} = 180^\circ$
- ii)  $s + \underline{\quad} = 180^\circ$
- iii)  $r = \underline{\quad}$

(3 marks)

6. Work out the following:

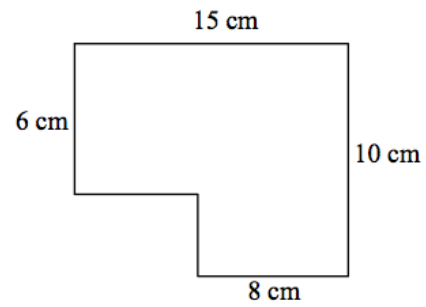
a)  $2.56 \times 1.2$

b)  $0.0144 \div 1.2$

(4 marks)

7. Calculate the perimeter and area of the shape shown. The diagram is not drawn to scale.

a) Perimeter



(2 marks)

b) Area

(3 marks)

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8. A table is marked €48. Mr Galea buys this table. He is given a 25% **discount**.

a) How much does he **save**?



(2 marks)

b) How much does he **pay** for the table?

(1 mark)

9. Work out the following:

a)  $\frac{2}{5} \times \frac{9}{10} \div \frac{27}{40}$

b)  $2\frac{1}{2} \times 2\frac{2}{5} \div \frac{3}{5}$

c)  $6\frac{1}{3} - 1\frac{2}{5} + 1\frac{8}{15}$

d)  $4\frac{1}{5} - 1\frac{3}{10} \div \frac{2}{5}$

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*(8 marks)*

10. Simplify the following:

a)  $2x + y - z + 3x - 2y$

b)  $2xyz \times 6x^2y$

c)  $4p(q + r) - 2p(q - r)$

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*(6 marks)*

11. Evaluate:

a)  $5^3$

b)  $3^{-3}$

c)  $13^0$

d)  $\left(\frac{3}{4}\right)^2$

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*(4 marks)*

12a) If 23% of the books in a library are reference books, which are not available for borrowing, what percentage of the books can be borrowed?

*(1 mark)*

c) Find 4% of 50m.

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*(1 mark)*

⌘ **End of Paper** ⌘