

**1<sup>st</sup> year end of year  
Mathematics assessment  
Non-Calculator**

**Paper 1**

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

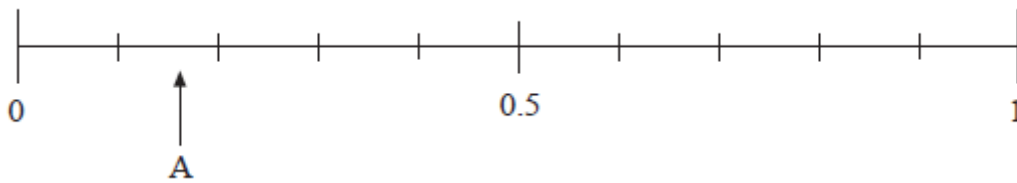
**Teacher:** \_\_\_\_\_

**Time allowed: 45 minutes**

***You must show all your working out.***

**Section A – mastery ( 25 marks )**

**1. On the probability line below, use an arrow to show where you think the probability of each of these events should be placed. The first one has been done for you.**



A: getting a six when you roll a fair dice

B: getting a Head when you toss a fair coin

C: getting a one or a two when you roll a fair dice

D: getting a blue ball when you randomly pick a ball from a bag containing 4 red balls and 6 blue balls

(3 marks)

**2. Emma rolls a fair dice 300 times. How many times would she expect to get a number greater than 4?**

.....  
.....  
.....

(2 marks)

**3. Round 16.497 to 2 decimal places**

**Answer:**

(1 mark)

4. Calculate:

(a)  $6 - 13 =$

(b)  $4 \times (-5) =$

(c)  $(-8) \div 2 =$

(d)  $(-9) \div (-3) =$

(4 marks)

5. Write down the next two numbers in each of the following sequences:

(a) 2, 6, 10, 14, ,

(b) 1, 2, 4, 7, 11, ,

(3 marks)

6. If  $a = 2$ ,  $b = 1$  and  $c = -4$  calculate:

i)  $a - b + c$

.....  
.....

Answer: .....

ii)  $c - 2a$

.....  
.....

Answer: .....

(4 marks)

7. Write 0.08 as a fraction in its simplest form.

.....  
.....

Answer: (2 marks)

8. Calculate each of the following, giving your answers in their simplest form:

a)  $\frac{5}{6} - \frac{3}{8}$

.....  
.....

**Answer:** (3 marks)

b)  $2\frac{4}{5} \times \frac{3}{4}$

.....  
.....

**Answer:** (3 marks)

**Section B – Problem –Solving ( 25 marks )**

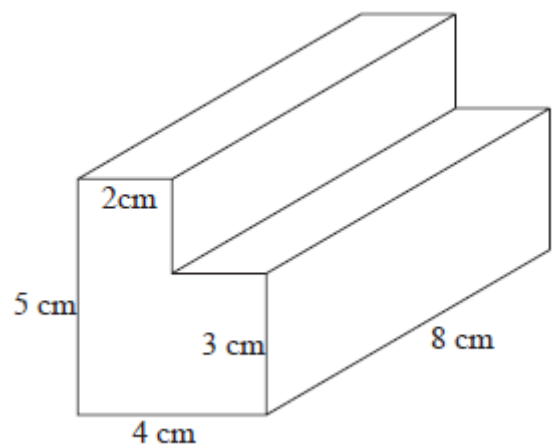
9. Jen has 21 metres of ribbon. She uses  $\frac{2}{7}$  of it on a craft project. How much ribbon does she have left?

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.....

**Answer:** ..... (4 marks)

10. Calculate the volume of the solid below:

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**Answer:** .....cm<sup>3</sup> (4 marks)

11. a) Find the nth term rule for the sequence 2, 4, 6, 8, ...

.....  
Answer: (1 marks)

b) Find the nth term rule for the sequence 4, 7, 10, 13, ...

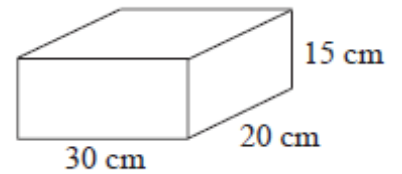
.....  
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Answer: (2 marks)

c) Hence write down the nth term rule for the sequence  $\frac{2}{4}, \frac{4}{7}, \frac{6}{10}, \frac{8}{13}, \dots$

.....  
Answer: (1 mark)

12. The mass of the cuboid shown is 1.8kg.

a) What is the density of the cuboid, in grams/cm<sup>3</sup>?

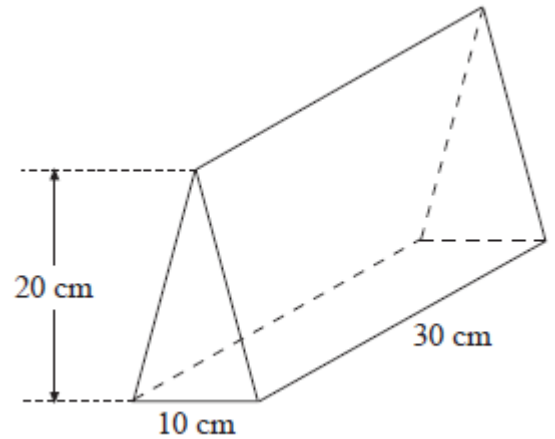


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Answer: g/cm<sup>3</sup>  
(5 marks)

b) Calculate the mass, in grams, of the triangular prism below, which is made from the same material.

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Answer: ..... g  
(4 marks)

**13.** Bowl A has 10 white chocolates and 15 dark chocolates. Bowl B has 12 white chocolates and 28 dark chocolates. Thomas is going to take a chocolate at random. He only likes white chocolate. Which bowl should he choose from? You must explain your choice.

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Answer: (4 marks)