

KS3 Practice Paper

Mathematics

Foundation

Non-Calculator

1 hour (60 marks)

Name: _____

Class: _____



Maths

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1. Complete the following calculations using the digits 1 to 9. You may use digits more than once.
The first one has been completed.

$$\begin{array}{|c|} \hline 1 \\ \hline \end{array} \begin{array}{|c|} \hline 9 \\ \hline \end{array} \times \begin{array}{|c|} \hline 4 \\ \hline \end{array} = \begin{array}{|c|} \hline 7 \\ \hline \end{array} \begin{array}{|c|} \hline 6 \\ \hline \end{array}$$

a. $\begin{array}{|c|} \hline \\ \hline \end{array} \begin{array}{|c|} \hline \\ \hline \end{array} \times \begin{array}{|c|} \hline 6 \\ \hline \end{array} = \begin{array}{|c|} \hline 7 \\ \hline \end{array} \begin{array}{|c|} \hline 2 \\ \hline \end{array}$ (1 mark)

b. $\begin{array}{|c|} \hline \\ \hline \end{array} \begin{array}{|c|} \hline \\ \hline \end{array} \times \begin{array}{|c|} \hline 6 \\ \hline \end{array} = \begin{array}{|c|} \hline \\ \hline \end{array} \begin{array}{|c|} \hline 4 \\ \hline \end{array}$ (1 mark)

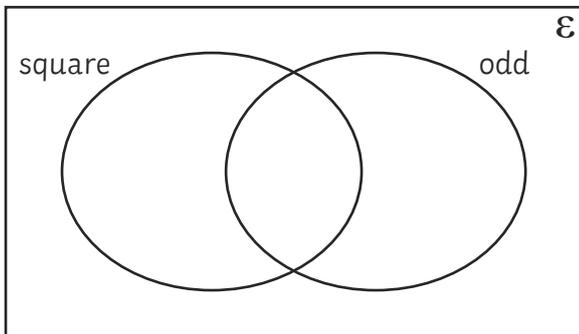
2. Calculate:

a. $81 \div 9$ (1 mark)

b. $738 \div 0.9$ (1 mark)

3. Place the following numbers in the Venn diagram:

5, 8, 16, 10, 4, 25, 9 (3 marks)



4. a. Calculate: $\frac{4}{5} \times 85$ (2 marks)

Evaluate the following. Write your answers in their simplest form.

b. $\frac{3}{7} \times \frac{14}{27}$ (2 marks)



c. $\frac{4}{5} \div \frac{32}{35}$ (2 marks)

5. Write each number using standard form:

a. 5 300 000 (1 mark)

b. 3000 (1 mark)

6. A shop sells a pack of 8 chocolate bars for £1.40.

a. How many packs will you need to buy so that you have 24 chocolate bars? (1 mark)

b. Hence, find the total cost of buying 24 chocolate bars. (1 mark)

7. Estimate: $\frac{34 \times 332}{12}$ (2 marks)

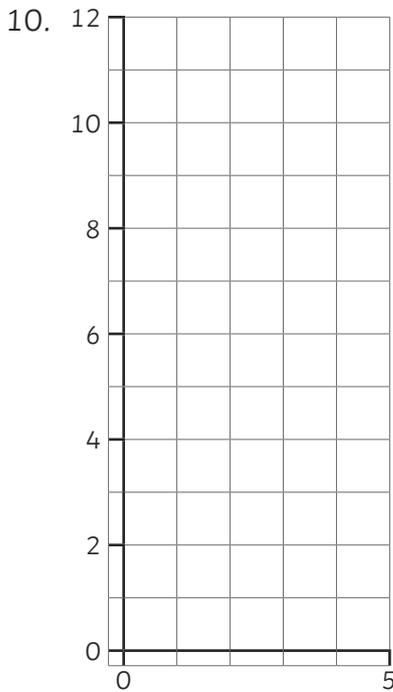
8. Find the value of x : $8x + 3 = 51$ (2 marks)

9. a. Expand: $12(a + 4)$ (1 mark)

b. Factorise: $12b - 18$ (1 mark)

c. Expand and simplify: $3(c + 7) + 4(3c - 3)$ (2 marks)





a. Complete the table of values for $y = 2x + 3$ (2 marks)

x	0	1	2	3	4
$y = 2x + 3$					

b. Use your table to draw the graph of $y = 2x + 3$ (2 marks)

11. An online shop will ship items for free on orders over £50. Alice orders 6 books costing £7 each and 3 birthday cards costing £2.50 each.

Calculate whether Alice will need to pay for shipping. You must show your working. (3 marks)

12. Make p the subject of this formula: $r = 7p - 5$ (2 marks)

13. a. Write down the first 5 terms in the sequence with the n^{th} term $4n + 2$ (2 marks)

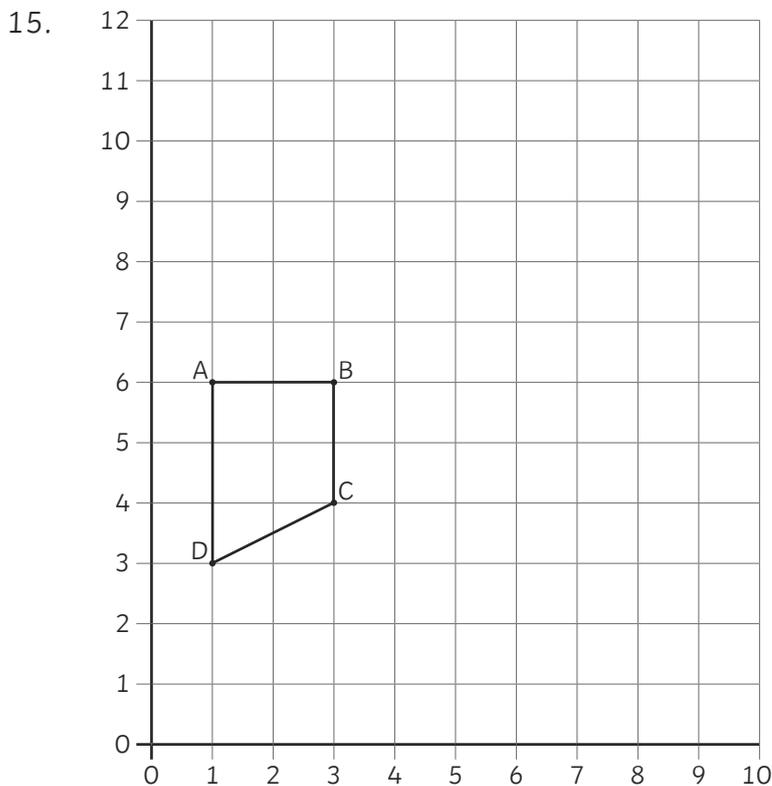
_____, _____, _____, _____, _____

b. Find the n^{th} term for the sequence:

2, 6, 10, 14, 18, ... (2 marks)

14. A cyclist rides 6km in 20 minutes. Find their average speed in kilometres per hour. (2 marks)





- a. Enlarge ABCD using scale factor 3 and centre of enlargement (1, 3). (2 marks)
- b. Reflect ABCD in the line $y = x$ (1 mark)

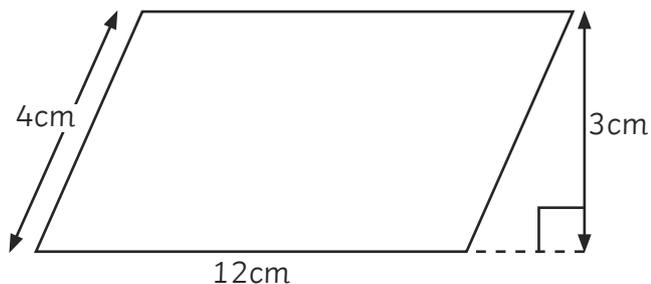
16. A bag contains coloured counters. There are 5 green counters, 2 white counters and 3 red counters. Jared chooses a counter at random from the bag.

- a. Calculate the probability that the counter is blue. (1 mark)

- b. Calculate the probability that the counter is not blue. (1 mark)

- c. Jared also rolls a fair six-sided dice and flips a coin. Calculate the probability that he obtains a 6 on the dice and a tail on the coin. (2 marks)

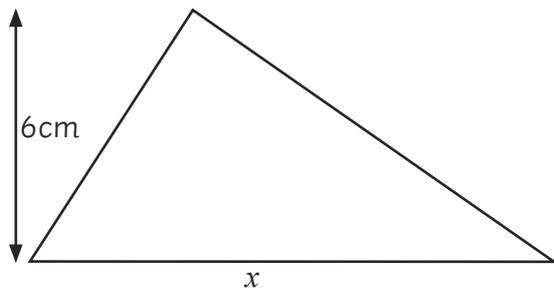
- 17. a. Calculate the area of the parallelogram: (1 mark)



_____ cm²



b. The area of the triangle is 16.5cm^2 . Calculate the value of x . (2 marks)



$x =$ _____

18. The ingredients to make 5 slices of fruit cake are shown in the table.

Self-Raising Flour	130g
Butter	80g
Sugar	75g
Mixed Fruit	150g
Egg	1

Self-Raising Flour	
Butter	
Sugar	
Mixed Fruit	
Egg	
Milk	

Alex is selling cakes at the local school fayre.

Calculate the amount of each ingredient needed to make 30 slices of fruit cake.

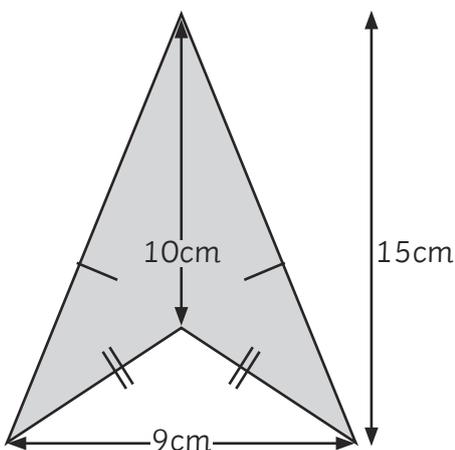
(2 marks)

19. Find:

a. 12% of 50 (2 marks)

b. 60% of 90 (2 marks)

20. Calculate the area of the shape: (4 marks)



_____ cm^2

