Year 7

Mathematics

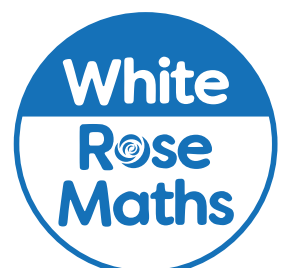## Foundation: No calculator allowed

Time allowed: 45 minutes

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
Teacher						

This assessment has been designed by White Rose Maths.

For more information, please visit **www.whiterosemaths.com**

White Rose Maths

1   Write the next term in the sequence.

1, 3, 5, 7, ☐

2   Circle the number that has 6 tens and 7 ones.

76   **607**   **67**   **670**

3   What fraction of the shape is shaded?

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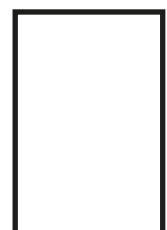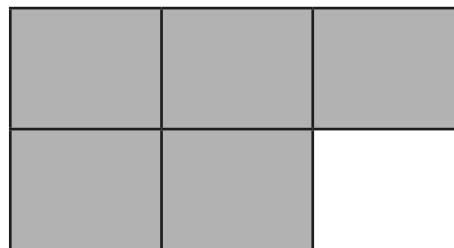
4 Draw an arrow to show the position of 60 on the number line.

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0   100
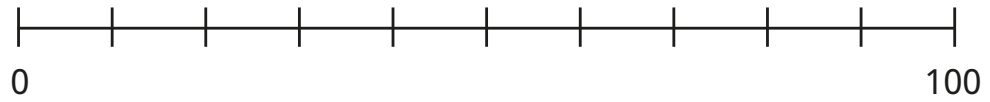
Draw an arrow to show the position of 25 on the number line.

├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤

0   100
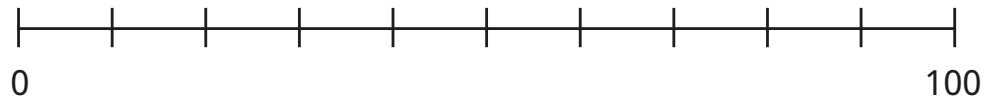
1 mark

Here is another number line.

Work out the value of A.

A
↓

├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤
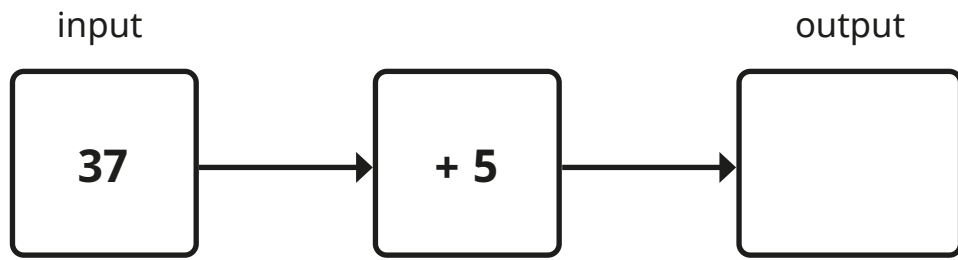
0   200
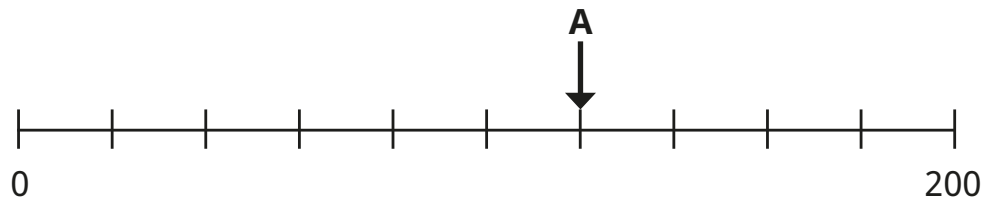
A =
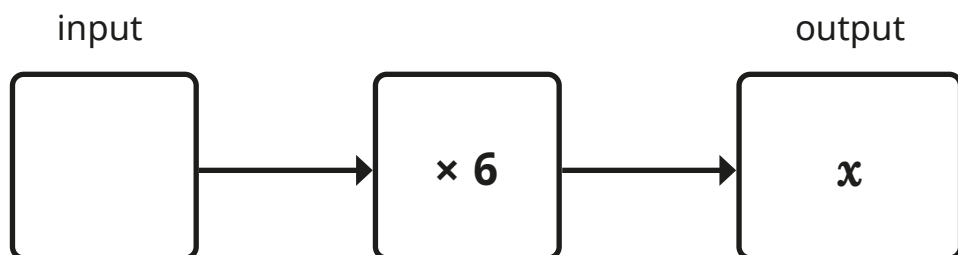
1 mark

5 Find the output for each function machine.

input

output

$$\boxed{37} \longrightarrow \boxed{+5} \longrightarrow \boxed{}$$

1 mark

input

output

$$\boxed{x} \longrightarrow \boxed{+5} \longrightarrow \boxed{}$$
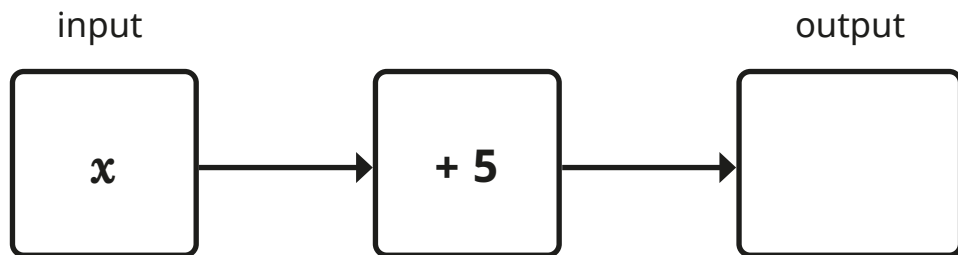
1 mark

Find the input for each function machine.

input

output

$$\boxed{} \longrightarrow \boxed{\times 6} \longrightarrow \boxed{30}$$

1 mark

input

output

$$\boxed{} \longrightarrow \boxed{\times 6} \longrightarrow \boxed{x}$$
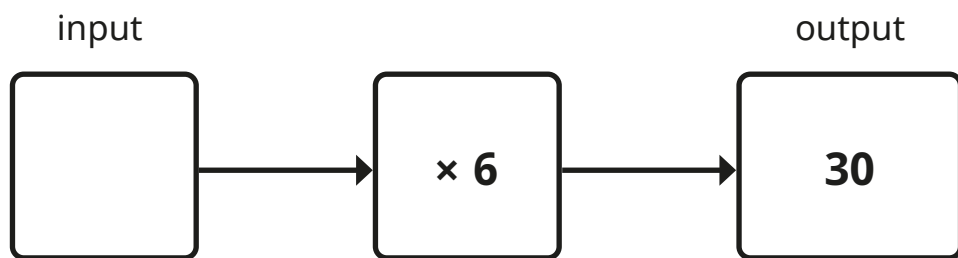
1 mark

6 Complete the table.

The first one has been done for you.

Words	Algebraic expression
w divided by 3	$\dfrac{w}{3}$
7 multiplied by c	
2 less than y	
y less than 2	

3 marks

7 Here are some digit cards.

| 1 | 4 | 5 | 7 |

Use all the cards to make an **even** number between 7000 and 8000

2 marks

8 Match each fraction to its decimal equivalent

$\frac{4}{100}$ 0.5

$\frac{1}{2}$ 0.25

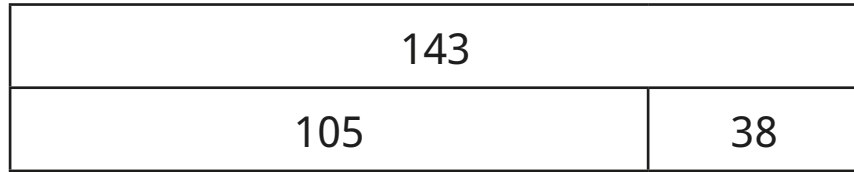$\frac{2}{10}$ 0.2

$\frac{1}{4}$ 0.04

2 marks

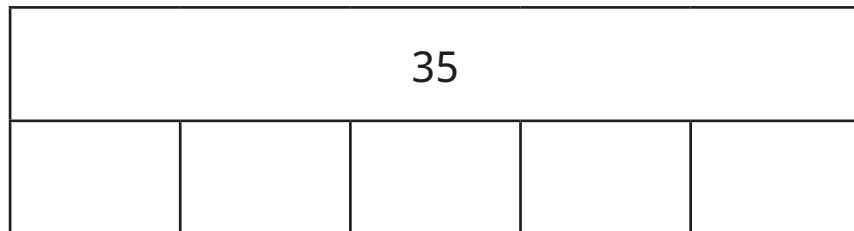Write $\frac{3}{4}$ as a percentage.

%

1 mark

9 Write two calculations represented by the bar model.

143	
105	38

Complete the bar model to represent the calculation.

$$7 \times 5 = 35$$

35				

10   Solve the equations.

$10 + a = 19$

$a =$

$h - 5 = 6$

$h =$

$\dfrac{d}{2} = 8$

$d =$

11   Amir and Whitney substitute $t = 6$ into the expression $4t$.

Amir gets an answer of 46

Whitney gets an answer of 24

Who is correct?

Circle your answer.

Amir   **Whitney**

Explain how you know.
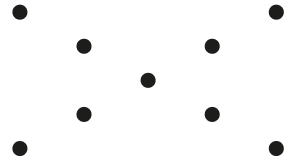
12 Each diagram shows a pattern using dots.

Pattern 1   Pattern 2   Pattern 3
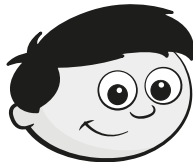
Complete the table to show the number of dots in each pattern in this sequence.

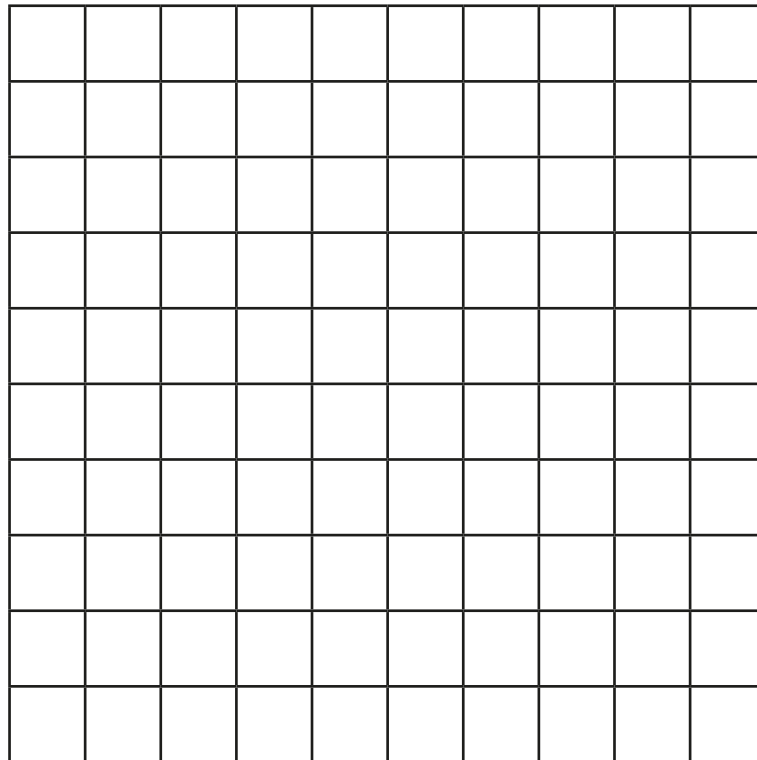| Pattern	1	2	3	4	5
Number of dots	1	5			

2 marks

I think that pattern 10 will use 40 dots because the pattern increases by 4 each time.
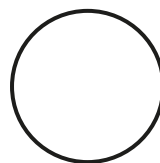
Explain why Dexter is wrong

1 mark

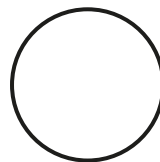**13** Shade 13% of the hundred square.

1 mark

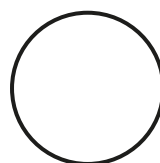Write <, > or = to complete the statements.

$\frac{1}{2}$ ◯ 0.2

70% ◯ $\frac{7}{100}$

$\frac{4}{5}$ ◯ $\frac{8}{10}$

3 marks

14 Tick the linear sequence.

2, 4, 8, 16, 32 ☐

1, 1, 2, 3, 5, 8 ☐

2, 5, 8, 11, 14 ☐

Another linear sequence starts at 101 and decreases by 2 each time.

Write the first four terms of the sequence.

☐ , ☐ , ☐ , ☐

15 Eva has represented 34.25 on a place value chart.

Tens	Ones	Tenths	Hundredths
⑩ ⑩ ⑩	① ① ① ①	0.1 0.1	0.01 0.01 0.01 0.01 0.01

What is five-tenths more than Eva's number?

☐

16 Round 29.35 to the nearest whole number.

<div style="border:1px solid black; width:200px; height:80px;"></div>

1 mark

Round 29.35 to the nearest ten.

<div style="border:1px solid black; width:200px; height:80px;"></div>

1 mark

17 Work out the value of x.

$$4x + 3x + x = 24$$

$x =$

2 marks

END OF TEST