

Summer Assessment

Year 7

Mathematics

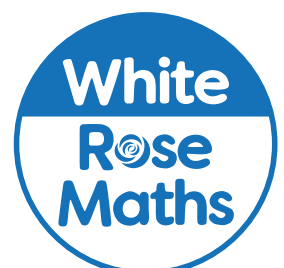
Higher: No calculator allowed

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



1

Write half a billion in figures.

1 mark

Write half a billion in standard form.

1 mark

Write 0.000 001 in standard form.

1 mark

2

Draw a heptagon.

1 mark

3

Without calculating the answers, explain why the two calculations are equal in value.

$$125 \times 6$$

$$30 \times 25$$

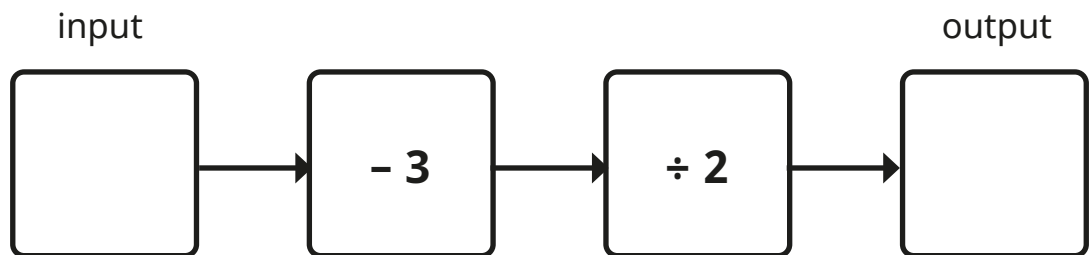
1 mark

Given that $7x = 94$, show that $14x + 12 = 200$

1 mark

4

The diagram shows a two-step function machine.



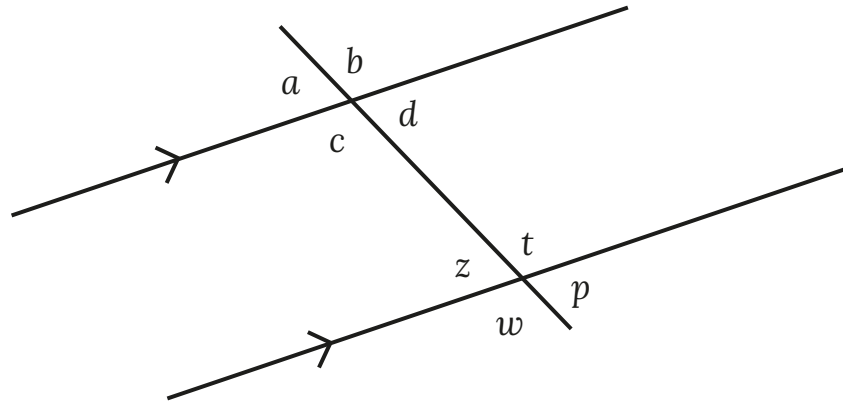
Work out the output when the input is 10

1 mark

Work out the output when the input is n .

1 mark

5



Write the angle that is corresponding to t .

1 mark

Write the angle that is co-interior with t .

1 mark

6

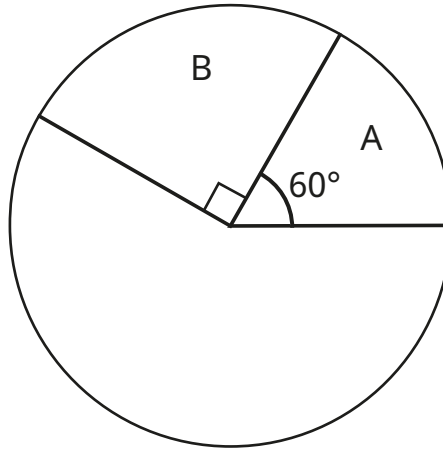
Use the clues to find the missing whole number.

- The number is less than $\frac{2}{7}$ of 301
- The number is greater than $\frac{7}{5}$ of 60

3 marks

7

Some people were asked which drink they liked best.
The drinks were labelled A, B, C and D.
Huan has begun to show the results using a pie chart.



15 people chose B and 12 people chose C.

Calculate how many people chose D.

3 marks

8

Work out the values of the expressions.

$$5 \times 10^1 - 4 \times 10^{-1}$$

1 mark

$$804 \times 0.01$$

1 mark

$$400\% \text{ of } 400$$

1 mark**9**

Solve the equations.

$$2x - 1.2 = 0.5$$

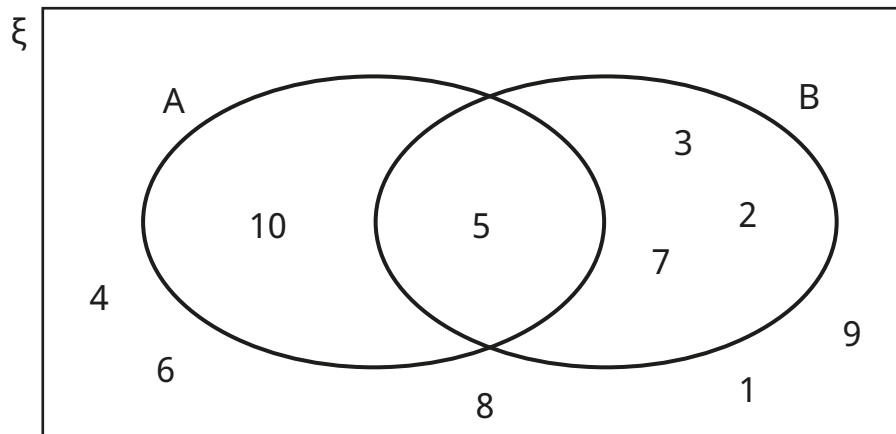
2 marks

$$1.2 - 2y = \frac{4}{5}$$

2 marks

10

Here is a Venn diagram.



List the members of set B' .

1 mark

A number is selected at random from the universal set.

Write the probability that the number is a member of $A \cup B$.

2 marks

11

$$450 = 2 \times 3^2 \times 5^2$$

$$648 = 2^3 \times 3^4$$

Work out the highest common factor (HCF) of 450 and 648

2 marks

Which expression is equal to the lowest common multiple (LCM) of 450 and 648?

Circle your answer.

$2 \times 3 \times 5$

$2^4 \times 3^6 \times 5^2$

$2 \times 3^4 \times 5^2$

$2^3 \times 3^4 \times 5^2$

1 mark

12

Simplify the expressions.

$$\frac{2}{x} - \frac{1}{x}$$

1 mark

$$\frac{18a^2b^3}{9ab}$$

2 marks

13

$$p = 3 \text{ and } q = -3$$

Work out the values of the expressions.

$$p - q$$

1 mark

$$\frac{p}{q}$$

1 mark

$$q^p$$

1 mark

14

The first two terms of a linear sequence are $\frac{1}{3}$ and $\frac{1}{2}$

Work out the next term in the sequence.

2 marks

A geometric sequence starts 27, , 3

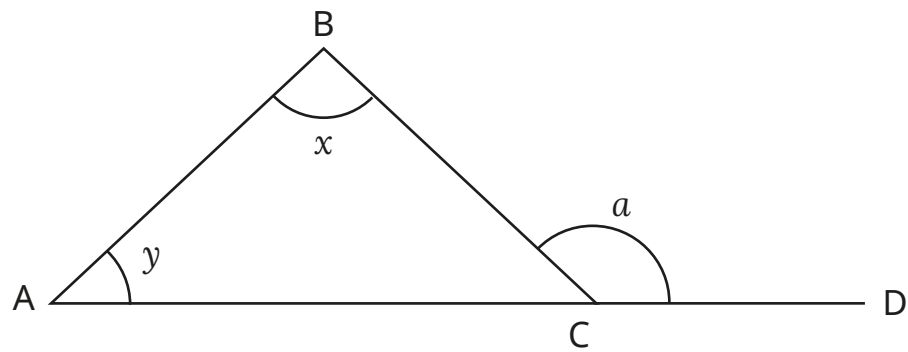
Work out the 2nd term of the sequence.

1 mark

15

ABC is a triangle.

ACD is a straight line.



Show that $a = x + y$.

2 marks

END OF TEST

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