AQA - Algebra – GCSE 2022 Mathematics

1. June/2022/Paper_8300/2F/No.2

   Here is an expression $5a + 7b + 9c$

   Which is the second term?

   Circle your answer.

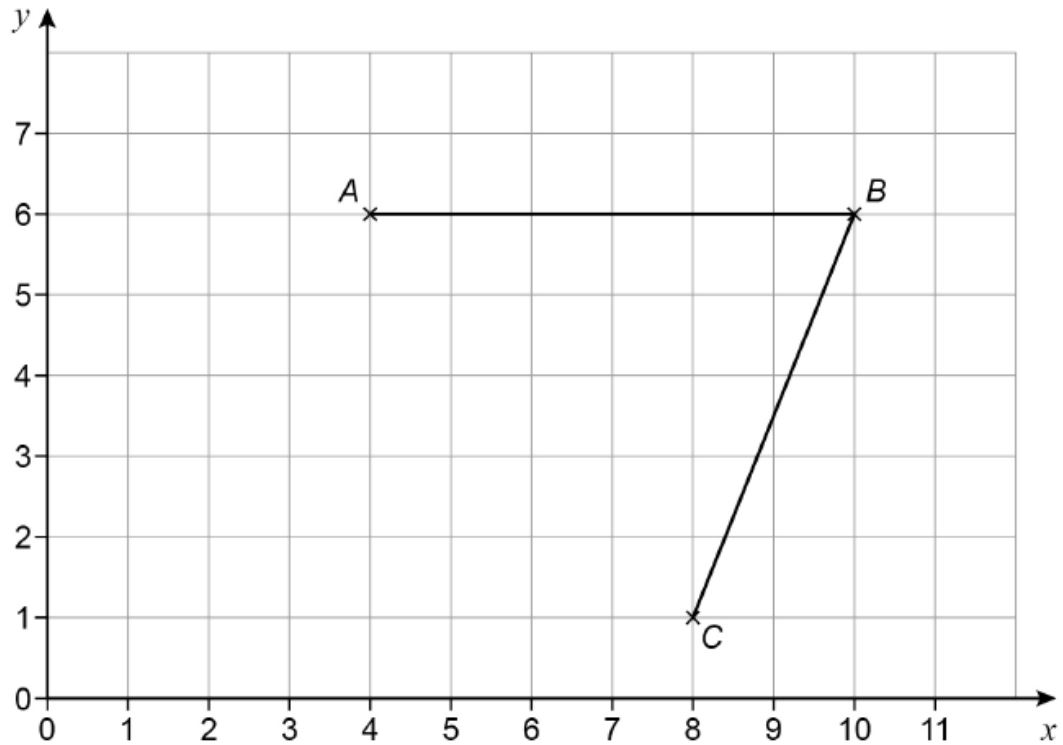   **[1 mark]**

   a 7 $7b$ 9

2. June/2022/Paper_8300/2F/No.10

Lines *AB* and *BC* are shown.

(a) Write down the coordinates of *C*.

[1 mark]

Answer (_____ , _____)

(b) Write down the coordinates of the midpoint of *AB*.

[1 mark]

Answer (_____ , _____)

3. June/2022/Paper_8300/2F/No.14

Match each expression on the left with one on the right.

One has been done for you.

[3 marks]

4. June/2022/Paper_8300/2F/No.17(c)

(c) Factorise $21x + 28$

[1 mark]

_____

_____

Answer _____

5. June/2022/Paper_8300/2F/No.19

   (a)   Circle the point that is on the line $4x + y = 7$

[1 mark]

        (2, 1)   (2, −1)   (1, 2)   (−1, 2)

   (b)   Write down the coordinates of the y-intercept of the line $y = 3x + 8$

[1 mark]

              Answer (_____ , _____)

   (c)   Work out the gradient of the line $2y = 10x$

[1 mark]

           Answer _____

6. June/2022/Paper_8300/2F/No.24

$4y = 5x$

Which statement is correct?

Tick **one** box.

[1 mark]

☐ y is 80% of x

☐ y is 125% of x

☐ x is 20% of y

☐ x is 400% of y

7. June/2022/Paper_8300/2H/No.12

$4y = 5x$

Which statement is correct?

Tick **one** box.

[1 mark]

☐ y is 80% of x

☐ y is 125% of x

☐ x is 20% of y

☐ x is 400% of y

8. June/2022/Paper_8300/2H/No.18

Solve $x^2 + 7x - 11 = 0$

Give your solutions as decimals.

[2 marks]

_____

_____

_____

_____

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_____

_____

_____

_____

Answer _____

9. June/2022/Paper_8300/2H/No.21

Which of these is the equation of a circle?

Circle your answer.

[1 mark]

$x^2 - y^2 = 6$ $\qquad$ $x^2 + y^2 = 6$ $\qquad$ $y = x^2 - 6$ $\qquad$ $y = x^2 + 6$

10. June/2022/Paper_8300/2H/No.23

Factorise $3x^2 - 16x - 12$

[2 marks]

_____

_____

_____

_____

_____

Answer _____

11. June/2022/Paper_8300/2H/No.24

A straight line

is perpendicular to the straight line through (2, 8) and (6, 15)

and

passes through (0, 9) and $(x, 17)$

Work out the value of x.

[4 marks]

12.

$f(x) = 2x + 5$

Show that $3f(x) - 12f^{-1}(x)$ simplifies to an integer.

[4 marks]