DOT

EDUCATION

(KHDA APPROVED)

Course	Edexcel
Time Allowed	1hr 30 min
Score	/
Percentage	/100

ALGEBRA QUESTIONS FOUNDATION EDEXCEL

1. JUNE 2024 QUESTION 2

(a) Simplify $10p - 4p + 9p$

.....

(1)

(b) Simplify $9 \times 4q$

.....

(1)

(c) Solve $4r = 15$

$r =$ .....

(1)

2. JUNE 2024 QUESTION 8

(a) Simplify $10x - 7y - 6x + 4y$

.....

(2)

$T = 4d - 6e$

(b) Work out the value of T when $d = 13$ and $e = 7$

$T =$ .....

(2)

(c) Solve $5p + 11 = 28$

$p =$ .....

(2)

3. JUNE 2024 QUESTION 21

(a) Expand and simplify $(m + 5)(m - 8)$

.....

(2)

(b) Solve $3n - 4 = \frac{5n + 6}{3}$

Show clear algebraic working.

$n =$ .....

(3)

4. JUNE 1FR 2024 QUESTION 11

(a) Simplify $c + c + c + c + c$

.....

(1)

(b) Simplify $7w + 10y - 9w + 2y$

.....

(2)

(d) Solve $7(x + 5) = 8 - 3x$
Show clear algebraic working.

$x =$ .....

(3)

5. JUNE 1FR 2024 QUESTION 13

Kye has some toy cars.

He has n red cars.
He has twice as many blue cars as red cars.
He has 7 more green cars than red cars.

(a) Write an expression, in terms of n, for the total number of red cars, blue cars and green cars that Kye has.
Write your answer in its simplest form.

.....

(2)

The total number of cars that Kye has is T

(b) Write an expression, in terms of T and n, for the number of cars that Kye has that are **not** red cars, blue cars or green cars.

.....

(1)

6. JUNE 2024 2F QUESTION 11

(a) Simplify $e \times e \times e \times e \times e$

.....

(1)

(b) Simplify $m + m + m$

.....

(1)

(c) Simplify $3g^2 + 7g^2 - 4g^2$

.....

(1)

(d) Expand $a(a + 8)$

.....

(1)

(e) Factorise $15x + 20$

.....

(1)

Sophia sells d packs of toy cars and h boxes of toy cars.

Each pack contains 3 toy cars.
Each box contains 5 toy cars.

The total number of toy cars that Sophia sells is T

(f) Write down a formula for T in terms of d and h

.....

(3)

7.

(a) Simplify $c \times c \times c$

.....

(1)

(b) Simplify $12d \times 3e$

.....

(1)

(c) Solve $\frac{k}{4} = 7$

$k =$ .....

(1)

(d) Solve $2g - 3 = 6$

$g =$ .....

(2)

(e) Expand $x(x - 4)$

.....

(1)

$P = 4y^2 + w$

(f) Work out the value of P when $y = -3$ and $w = 2$

$P =$ .....

(2)

8.

(a) Solve $\frac{2f}{3} = 4f - 17$

Show clear algebraic working.

$f =$ .....

(3)

9.

(a) Simplify $p + p + p + p$

.....

(1)

(b) Simplify $5e + 6f + 7e - 2f$

.....

(2)

(c) Solve $13 - x = 7$

$x =$ .....

(1)

(d) Solve $4y + 7 = 43$

$y =$ .....

(2)

10. JUNE 2023 1F QUESTION 7

(a) Simplify $6a \times 2c$

.....

(1)

(b) Simplify $4d + 3e + d - 5e$

.....

(2)

(c) Solve $4x - 7 = 23$

$x =$ .....

(2)

11. JUNE 1FR 2024 QUESTION 23

(a) Expand $4x(x - 5)$

.....

(1)

(b) Factorise $y^2 - 9y + 20$

.....

(2)

12.

(a) Expand $x(3 - x)$

.....

(1)

(b) Factorise fully $12a - 18b$

.....

(2)

There are 8 slices of cheese in each small pack of cheese.
There are 20 slices of cheese in each large pack of cheese.

Afreen buys h small packs of cheese and j large packs of cheese.
She buys a total of T slices of cheese.

(c) Write down a formula for T in terms of h and j

.....

(3)

13.

(a) Factorise $6y - 27$

.....

(1)

(b) Expand $p(p - 2)$

.....

(1)

$T = 5g + 4r$

(c) Work out the value of r when $T = 46$ and $g = 17$

$r =$ .....

(3)

$P = m^2 - 4c$

(d) Work out the value of P when $m = -5$ and $c = 3$

$P =$ .....

(2)

(e) Expand and simplify $(x + 5)(x - 7)$

.....

(2)

14. OCTOBER 2023 1F QUESTION 7

(a) Simplify $9d \times 5c$

.....

(1)

(b) Simplify $7p + 5n - 9p + 3n$

.....

(2)

$T = 8e - 6f$

(c) Work out the value of T when $e = 9$ and $f = 5$

$T =$ .....

(2)

(d) Solve $5m - 6 = 17$

$m =$ .....

(2)

15. OCTOBER 2023 1F QUESTION 16

(a) Factorise fully $12pq - 18p$

.....

(2)

There are 56 metal bars in a box.
Each metal bar is gold or silver or zinc.

y metal bars are gold.
$(3y + 7)$ metal bars are silver.
$(2y - 5)$ metal bars are zinc.

(b) Work out the number of metal bars that are zinc.
Show clear algebraic working.

(4)

16. OCTOBER 2023 2F QUESTION 12

(a) Expand $x(x + 3)$

(1)

(b) Factorise $8p + 10$

(1)

(c) Make e the subject of $y = eh - f$

(2)

Janya thinks of a whole number.
She calls her whole number w
Janya writes down this information about her whole number.

$$w > 7 \quad \text{and} \quad w \leqslant 10$$

(d) Write down the possible values of w

.....

(2)

17.

(a) Solve $\frac{2x+5}{6} = 2x - 5$

Show clear algebraic working.

$x =$ .....

(3)

18.

(a) Simplify $5p \times 9k$

.....

(1)

(b) Simplify $3e + 2f + 8e - 7f$

.....

(2)

(c) Solve $2d + 7 = 16$

$d =$ .....

(2)

19.

$p = t - ac$

$t = 18$
$a = -3$
$c = 5$

(a) Work out the value of p

$p =$ .....

(2)

(b) Make x the subject of the formula $d = 3x + 10$

.....

(2)

20. JANUARY 2023 1F QUESTION 17

Solve $3(2 - 4x) = 5 - 8x$
Show clear algebraic working.

$x =$ .....

3 MARKS

21. JANUARY 2023 1FR 4

(a) Simplify $10y - y$

.....

(1)

(b) Simplify $3p \times 4p$

.....

(1)

(c) Solve $7x = 42$

$x =$ .....

(1)

(d) Solve $n + 6 = 5$

$n =$ .....

(1)

(e) Simplify $8c + 5d - 2c - 3d$

.....

(2)

22. JANUARY 2023 2F QUESTION 7

(a) Simplify $c \times c \times c \times c \times c$

.....

(1)

(b) Solve $5 + x = 12$

$x =$ .....

(1)

(c) Solve $\frac{y}{6} = 3$

$y =$ .....

(1)

(d) Expand $5(2 + 3h)$

.....

(1)

(e) Factorise $g^2 + 7g$

.....

(1)

23. JANUARY 2023 2FR QUESTION 14

(a) Expand $x(10 - x)$

.....

(1)

(b) Factorise $6y + 27$

.....

(1)

(c) Make m the subject of the formula $h = \frac{m}{2} + 4$

.....

(2)

(d) Solve $7g + 3 = 2g - 5$
Show clear algebraic working.

$g =$ .....

(3)