EXPANDING AND FACTORISING

Pearson Edexcel - Tuesday 19 May 2020 - Paper 1 (Non-Calculator) Foundation Tier

1.

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

.....

(1)

(b) Factorise $15y - 10$

.....

(1)

(c) Solve $7(f - 5) = 28$

$f =$ .....

(2)

(Total for Question 19 is 4 marks)

Pearson Edexcel - Tuesday 21 May 2019 - Paper 1 (Non-Calculator) Foundation Tier

2.

16 (a) Expand $5(2m - 3)$

.....

(1)

(b) Factorise $3n + 12$

.....

(1)

(Total for Question 16 is 2 marks)

Pearson Edexcel - Thursday 8 November 2018 - Paper 2 (Calculator) Foundation Tier

3.

19 (a) Solve $3(x - 4) = 12$

$x =$ .....

(2)

(b) Factorise fully $9b - 3b^2$

.....

(2)

(Total for Question 19 is 4 marks)

Pearson Edexcel - Tuesday 12 June 2018 - Paper 3 (Calculator) Foundation Tier

4.

20 Expand and simplify $5(p + 3) - 2(1 - 2p)$

.....

(Total for Question 20 is 2 marks)

Pearson Edexcel - Wednesday 8 November 2017 - Paper 3 (Calculator) Foundation Tier

5.

17 (a) Factorise $4m + 12$

.....

(1)

expression	equation	formula	identity
inequality	term	factor	multiple

(b) Choose two words from the box above to make this statement correct.

$5y$ is a ..... in the ..... $3x + 5y$

(2)

(Total for Question 17 is 3 marks)

Pearson Edexcel – Specimen 2 - Paper 1 (Non-Calculator) Foundation Tier

6.

19 (a) Factorise $y^2 + 27y$

.....

(1)

(b) Simplify $(t^3)^2$

.....

(1)

(c) Simplify $\frac{w^9}{w^4}$

.....

(1)

(Total for Question 19 is 3 marks)

Pearson Edexcel – Specimen 2 - Paper 2 (Calculator) Foundation Tier

7.

17 (a) Simplify $7x + 2y - 3x + 4y$

.....

(2)

(b) Factorise $10x - 15$

.....

(1)

(c) Solve $5p = 3p + 8$

$p =$ .....

(2)

(Total for Question 17 is 5 marks)

8.

24 (a) Expand and simplify $3(y - 2) + 5(2y + 1)$

.....

(2)

(b) Simplify $5u^2w^4 \times 7uw^3$

.....

(2)

(Total for Question 24 is 4 marks)

Pearson Edexcel – Specimen 1 - Paper 1 (Non-Calculator) Foundation Tier

9.

27 Expand and simplify $(x + 3)(x - 1)$

.....

(Total for Question 27 is 2 marks)

10.

28 Factorise $x^2 - 16$

.....

(Total for Question 28 is 1 mark)

OCR Tuesday 5 November 2019 – Morning (Calculator) Foundation Tier

11.

7 Factorise fully.

(a) $6 + 9y$

(a) ..... **[1]**

(b) $2x^2 + 6x$

(b) ..... **[2]**

OCR Tuesday 21 May 2019 – Morning (Calculator) Foundation Tier

12.

6 **(a)** Multiply out.

$4(3x + 2)$

(a) ..... **[1]**

(b) Factorise.

$3c - 6d$

(b) ..... **[1]**

OCR Tuesday 6 November 2018 – Morning (Calculator) Foundation Tier

13.

14 **(a)** Find the value of x in each of the following.

(i) $a^4 \times a^3 = a^x$

(a)(i) $x =$ ..... **[1]**

(ii) $(b^4)^3 = b^x$

(ii) $x =$ ..... **[1]**

(b) Factorise fully.

$18x^2 + 9x$

(b) ..... **[2]**

OCR Monday 24 May 2018 – Morning (Calculator) Foundation Tier

14.

7 (a) Solve.

(i) $4x = 56$

(a)(i) $x =$ ..... [1]

(ii) $\frac{126}{x} = 7$

(ii) $x =$ ..... [1]

(iii) $8x - 6 = 46$

(iii) $x =$ ..... [2]

(b) Solve by factorising.

$x^2 + 11x + 30 = 0$

(b) $x =$ ..... or $x =$ ..... [3]

OCR Thursday 7 June 2018 – Morning (Non Calculator) Foundation Tier

15.

12 **(a)** Multiply out.

$$4c(d - 5)$$

(a) ..... **[2]**

(b) Multiply out and simplify.

$$(3x + 2)(x - 4)$$

(b) ..... **[2]**

(c) Solve.

$$3x - 2 \leqslant 22$$

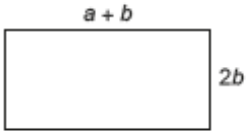
(c) ..... **[2]**

OCR Tuesday 12 June 2018– Morning (Calculator) Foundation Tier

16.

13 In this question, assume all dimensions are in centimetres.

Jess and Pete have many rectangular tiles.
Each tile has length $a + b$ and width $2b$.



Not to scale

(a) Jess joins three tiles together to make a larger rectangle, as shown.

Not to scale

(i) Write an expression for the perimeter of her rectangle.
Give your answer in its simplest form.

(a)(i) ..... **[2]**

(ii) An expression for the **area** of her rectangle is $6ab + 6b^2$.

Factorise this expression fully.

(ii) ..... **[2]**

(b) Pete joins some tiles together to make a different rectangle.
The area of his rectangle is $8ab + 8b^2$.

Draw a possible arrangement of tiles for Pete's rectangle.
Write down expressions for the length and for the width of the rectangle.

length = ...

width = ... **[5]**

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OCR Monday 6 November 2017– Morning (Calculator) Foundation Tier

17.

6 **(a)** Simplify fully.

(i) $4(c+2d)+3(3c-5d)$

(a)(i) ..... **[3]**

(ii) $4a \times 5b$

(ii) ..... **[1]**

(b) Factorise fully.

(i) $6g+8h$

(b)(i) ..... **[1]**

(ii) $5x^2-15x$

(ii) ..... **[2]**

Pearson Edexcel –Sample Papers - Paper 2 (Calculator) Foundation Tier

18.

20 (a) Factorise $3f + 9$

.....

(1)

(b) Factorise $x^2 - 2x - 15$

.....

(2)

(Total for Question 20 is 3 marks)

OCR Thursday 25 May 2017 – Morning (Calculator) Foundation Tier

19.

7 **(a)** Simplify.

$$7t - 6u + 5t - 4u$$

(a) ..... **[2]**

(b) Factorise.

$$5v + 20w$$

(b) ..... **[1]**

(c) Solve by factorising.

$$x^2 + 10x + 21 = 0$$

(c) $x =$ ..... or $x =$ ..... **[3]**

OCR Tuesday 13 June 2017 – Morning (Calculator) Foundation Tier

20.

4 **(a)** Expand and simplify.

$$5(x-2)-2(x-4)$$

(a) ..... **[2]**

(b) Factorise fully.

$$10x^2+6x$$

(b) ..... **[2]**

(c) Simplify.

$$(x^5)^2$$

(c) ..... **[1]**

AQA Tuesday 19 May 2020 – Morning (Non-Calculator) Foundation Tier

21.

25 Factorise fully $2x^2 + 6x$

[2 marks]

Answer _____

AQA Monday 8 June 2020 – Morning (Calculator) Foundation Tier

22.

27 Circle the expression that is equivalent to $(x-1)^2$

[1 mark]

x^2-1 x^2+1 x^2-2x-1 x^2-2x+1

23.

30 Expand and simplify fully $4(2c+3)-(5c-1)$

[2 marks]

Answer _____

AQA Thursday 11 June 2019 – Morning (Calculator) Foundation Tier

24.

19 (a) Simplify fully $3a^2 + 7a + 3 - a^2 + 8a - 4$

[3 marks]

Answer _____

19 (b) Factorise fully $24y^2 - 20y$

[2 marks]

Answer _____

AQA Thursday 7 June 2018 – Morning (Calculator) Foundation Tier

25.

19 Multiply out $x(x - 4)$

Circle your answer.

[1 mark]

$x^2 - 4$ $2x - 4$ $x^2 - 4x$ $-3x^2$

AQA Tuesday 13 June 2017 Morning– Morning (Calculator) Foundation Tier

26.

26 Circle the expression equivalent to $x^2 - 4x - 12$

[1 mark]

$(x - 4)(x - 8)$ $(x + 3)(x - 4)$ $(x - 12)(x + 1)$ $(x + 2)(x - 6)$