Multiple choice questions - Expanding binomials and taking out common factors

Year: Year 9 · 10

Question 1 Expand $(x+3)(x+5)$.

- ◯ **A.** x^2+15
- ◯ **B.** $x^2+8x+15$
- ◯ **C.** x^2+8x+8
- ◯ **D.** $2x+8$

Question 2 Expand $(x-2)^2$.

- ◯ **A.** x^2-4
- ◯ **B.** x^2+4
- ◯ **C.** x^2-4x+4
- ◯ **D.** x^2-2x+4

Question 3 Factorise $10x-15$.

- ◯ **A.** $5(2x-3)$
- ◯ **B.** $5(2x-15)$
- ◯ **C.** $10(x-5)$
- ◯ **D.** $5(2x+3)$

Question 4 Expand $(x+6)(x-6)$.

- ◯ **A.** x^2+36
- ◯ **B.** $x^2-12x+36$
- ◯ **C.** x^2-36
- ◯ **D.** x^2-12

Question 5 Which is fully factorised?

- ◯ **A.** $2(3x+6)$
- ◯ **B.** $3(2x+4)$
- ◯ **C.** $6(x+2)$
- ◯ **D.** $2(x+2)+2x$

Question 6 Factorise x^2-7x.

- ◯ **A.** $x(x-7)$
- ◯ **B.** $x(x-7x)$

- ◯ **C.** $(x-7)^2$
- ◯ **D.** $7x(x-1)$

Question 7 Expand $(2x-1)(x+4)$.

- ◯ **A.** $2x^2+7x-4$
- ◯ **B.** $2x^2-4$
- ◯ **C.** $2x^2+9x-4$
- ◯ **D.** $2x^2+7x+4$

Question 8 Factorise fully $8ab^2+12a^2b$.

- ◯ **A.** $2ab(4b+6a)$
- ◯ **B.** $4ab(2b+3a)$
- ◯ **C.** $4(2ab^2+3a^2b)$
- ◯ **D.** $ab(8b+12a)$

Question 9 Simplify $3(x+2)-(x-4)$.

- ◯ **A.** $2x+2$
- ◯ **B.** $2x+10$
- ◯ **C.** $4x+2$
- ◯ **D.** $2x-2$

Question 10 What is the coefficient of x in the expansion of $(x+4)(x-9)$?

- ◯ **A.** 13
- ◯ **B.** -5
- ◯ **C.** 5
- ◯ **D.** -36

Answer grid - Expanding binomials and taking out common factors

Year: Year 9

Question	Answer	Explanation
1	**B**	$x^2 + 5x + 3x + 15$.
2	**C**	$(x-2)(x-2) = x^2 - 2x - 2x + 4$.
3	**A**	HCF of 10 and 15 is 5.
4	**C**	Middle terms cancel: difference of two squares.
5	**C**	$6(x+2)$: no common factor remains in the bracket.
6	**A**	x is the common factor.
7	**A**	$2x^2 + 8x - x - 4 = 2x^2 + 7x - 4$.
8	**B**	HCF is 4ab.
9	**B**	$3x + 6 - x + 4 = 2x + 10$.
10	**B**	$x^2 - 9x + 4x - 36$: $-9 + 4 = -5$.