Multiple choice questions - Algebra: expressions and factorising

Year: Year 8 · 10

Question 1 Simplify $7x - 3x + 2$.

- **A.** $4x + 2$
- **B.** $6x$
- **C.** $4x^2$
- **D.** $9x$

Question 2 Simplify $2a \times 5a$.

- **A.** $10a$
- **B.** $7a$
- **C.** $10a^2$
- **D.** $25a$

Question 3 Expand $4(x - 3)$.

- **A.** $4x - 3$
- **B.** $4x - 12$
- **C.** $4x + 12$
- **D.** $x - 12$

Question 4 Expand $-2(x - 5)$.

- **A.** $-2x - 10$
- **B.** $-2x + 5$
- **C.** $-2x + 10$
- **D.** $2x - 10$

Question 5 Factorise $8x + 12$.

- **A.** $4(2x + 3)$
- **B.** $2(4x + 12)$
- **C.** $8(x + 12)$
- **D.** $4(2x + 12)$

Question 6 Factorise fully $9x^2 + 6x$.

- **A.** $3(3x^2 + 2x)$
- **B.** $x(9x + 6)$
- **C.** $3x(3x + 2)$

- ◯ **D.** $9x(x+6)$

Question 7 Simplify $x^6 \div x^2$.

- ◯ **A.** x^3
- ◯ **B.** x^4
- ◯ **C.** x^8
- ◯ **D.** x^{12}

Question 8 Which pair are like terms?

- ◯ **A.** $3x$ and $3y$
- ◯ **B.** $2x^2$ and $2x$
- ◯ **C.** $5ab$ and ba
- ◯ **D.** $4x$ and 4

Question 9 Expand and simplify $2(x+1)+3(x+2)$.

- ◯ **A.** $5x+3$
- ◯ **B.** $5x+8$
- ◯ **C.** $5x+5$
- ◯ **D.** $6x+8$

Question 10 Simplify $(3x^2)^2$.

- ◯ **A.** $9x^4$
- ◯ **B.** $6x^4$
- ◯ **C.** $9x^2$
- ◯ **D.** $3x^4$

Answer grid - Algebra: expressions and factorising

Year: Year 8

Question	Answer	Explanation
1	**A**	$7x - 3x = 4x$, the 2 stays.
2	**C**	$2 \times 5 = 10$ and $a \times a = a^2$.
3	**B**	Multiply both terms by 4.
4	**C**	$-2 \times -5 = +10$.
5	**A**	The HCF is 4.
6	**C**	The HCF is $3x$.
7	**B**	Subtract indices.
8	**C**	ab and ba have the same letters.
9	**B**	$2x + 2 + 3x + 6 = 5x + 8$.
10	**A**	Square the 3 and double the index.