Foundation Expanding and Factorising – **Diagnostic Test**

1. Expand $3(5x + 2)$.

   A. $15x + 5$ ☐

   B. $15x + 6$ ☐

   C. $8x + 5$ ☐

   D. $8x + 2$ ☐

2. Expand $2p(7p - 5)$.

   A. $28p - 10$ ☐

   B. $18p$ ☐

   C. $14p^2 - 10p$ ☐

   D. $14p - 10$ ☐

3. Fully factorise $12y - 6$.

   A. $2(2y - 3)$ ☐

   B. $6(2y - 1)$ ☐

   C. $6(2y - 0)$ ☐

   D. $3(2y - 3)$ ☐

4. Fully factorise $8x^2 - 20x$.

   A. $2(2x^2 - 10)$ ☐

   B. $4(2x^2 - 5x)$ ☐

   C. $x(8x - 20)$ ☐

   D. $4x(2x - 5)$ ☐

5. Simplify $3(5x + 7) + 4(2x - 5)$.

   A. $23x + 1$ ☐

   B. $23x + 2$ ☐

   C. $23x + 12$ ☐

   D. $23x + 41$ ☐

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6. Simplify $7(2x - 3) - 2(3x - 1)$.

   A. $8x - 19$ ☐

   B. $20x + 23$ ☐

   C. $8x - 25$ ☐

   D. $20x - 25$ ☐

7. Which one of the following expressions is equivalent to $3(2x + 5) - 6(3x - 1)$?

   A. $3(7 - 4x)$ ☐

   B. $3(3 - 4x)$ ☐

   C. $3(8x + 3)$ ☐

   D. $3(8x + 7)$ ☐

8. Expand $(x + 5)(x - 3)$.

   A. $x^2 + 8x + 15$ ☐

   B. $x^2 + 2x - 15$ ☐

   C. $x^2 - 15$ ☐

   D. $x^2 + 2x + 15$ ☐

9. Expand and simplify $(3x - 5)^2$.

   A. $9x^2 - 25$ ☐

   B. $9x^2 + 25$ ☐

   C. $9x^2 - 30x + 25$ ☐

   D. $9x^2 - 30x - 25$ ☐

10. Expand and simplify $(2x + 3)(5x - 1)$.

    A. $10x^2 - 3$ ☐

    B. $10x^2 + 13x - 3$ ☐

    C. $10x^2 + 15x - 3$ ☐

    D. $10x^2 + 2x - 3$ ☐

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11. Expand and simplify $(x - 7)(x + 7)$.

    A. $x^2 + 14x + 49$ ☐

    B. $x^2 - 14x + 49$ ☐

    C. $x^2 - 14$ ☐

    D. $x^2 - 49$ ☐

12. Fully factorise $x^2 - 11x + 18$.

    A. $(x + 9)(x + 2)$ ☐

    B. $(x - 3)(x + 6)$ ☐

    C. $(x + 9)(x - 2)$ ☐

    D. $(x - 9)(x - 2)$ ☐

13. Fully factorise $x^2 - 9$.

    A. $x(x - 9)$ ☐

    B. $(x - 3)^2$ ☐

    C. $(x + 3)(x - 3)$ ☐

    D. $(x + 3)^2$ ☐

14. Fully factorise $x^2 + 7x + 10$.

    A. $(x + 5)(x + 2)$ ☐

    B. $(x + 3)(x + 4)$ ☐

    C. $(x + 8)(x + 2)$ ☐

    D. $(x + 10)(x - 2)$ ☐

15. Fully factorise $x^2 - 5x - 14$.

    A. $(x - 2)(x + 7)$ ☐

    B. $(x - 7)(x + 2)$ ☐

    C. $(x - 9)(x + 6)$ ☐

    D. $(x - 6)(x + 9)$ ☐

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