Maths with Melissa

Expanding Double Brackets Worksheet

1. Expand the following expression: $(x + 2)(x + 5)$

2. Expand and simplify: $(a - 3)(a + 4)$

3. Expand the expression and then evaluate it for $y = -1$: $(y + 6)(y - 2)$

4. Expand: $(2m - 7)(m + 3)$

5. Expand and simplify: $(x - 4)(x - 1)$

6. If $p = 2$, expand and find the value of $(p + 5)(p - 3)$

7. Expand the following: $(z + 8)(z - 2)$

8. Expand and simplify: $(3q - 4)(q + 2)$

9. Expand and simplify: $(w - 6)(w + 6)$

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

Answer Key

1. $(x + 2)(x + 5) = x^2 + 5x + 2x + 10 = \mathbf{x^2 + 7x + 10}$
2. $(a - 3)(a + 4) = a^2 + 4a - 3a - 12 = \mathbf{a^2 + a - 12}$
3. $(y + 6)(y - 2) = y^2 - 2y + 6y - 12 = y^2 + 4y - 12$; For $y = -1$: $(-1)^2 + 4(-1) - 12 = 1 - 4 - 12 = \mathbf{-15}$
4. $(2m - 7)(m + 3) = 2m^2 + 6m - 7m - 21 = \mathbf{2m^2 - m - 21}$
5. $(x - 4)(x - 1) = x^2 - x - 4x + 4 = \mathbf{x^2 - 5x + 4}$
6. $(p + 5)(p - 3) = p^2 - 3p + 5p - 15 = p^2 + 2p - 15$; For $p = 2$: $2^2 + 2 \times 2 - 15 = 4 + 4 - 15 = \mathbf{-7}$
7. $(z + 8)(z - 2) = z^2 - 2z + 8z - 16 = \mathbf{z^2 + 6z - 16}$
8. $(3q - 4)(q + 2) = 3q^2 + 6q - 4q - 8 = \mathbf{3q^2 + 2q - 8}$
9. $(w - 6)(w + 6) = w^2 + 6w - 6w - 36 = w^2 - 36$
10. $(2x + 5)(x - 3) = 2x^2 - 6x + 5x - 15 = \mathbf{2x^2 - x - 15}$