

Activity 1.3.2: Factoring General Trinomials

Total points = 40

Answers

1. $3x^2 + 3x + 4x + 4$ ✓
= $(3x^2 + 3x) + (4x + 4)$ ✓
= $3x(x + 1) + 4(x + 1)$ ✓
= $(x + 1)(3x + 4)$ ✓
2. $2x^2 - 3x + 6x - 9$ ✓
= $(2x^2 - 3x) + (6x - 9)$ ✓
= $x(2x - 3) + 3(2x - 3)$ ✓
= $(2x - 3)(x + 3)$ ✓
3. $6a^2 + 2a + 9a + 3$ ✓
= $(6a^2 + 2a) + (9a + 3)$ ✓
= $2a(3a + 1) + 3(3a + 1)$ ✓
= $(3a + 1)(2a + 3)$ ✓
4. $4m^2 - 8m + 3m - 6$ ✓
= $(4m^2 - 8m) + (3m - 6)$ ✓
= $4m(m - 2) + 3(m - 2)$ ✓
= $(m - 2)(4m + 3)$ ✓
5. $3a^2 - 4a + 3a - 4$ ✓
= $(3a^2 - 4a) + (3a - 4)$ ✓
= $a(3a - 4) + (3a - 4)$ ✓
= $(3a - 4)(a + 1)$ ✓
6. $4m^2 - 8mn - 3mn + 6n^2$ ✓
= $(4m^2 - 8mn) - (3mn - 6n^2)$ ✓
= $4m(m - 2n) - 3n(m - 2n)$ ✓
= $(m - 2n)(4m - 3n)$ ✓
7. $3a^2 - 9ab + 2ab - 6b^2$ ✓
= $(3a^2 - 9ab) + (2ab - 6b^2)$ ✓
= $3a(a - 3b) + 2b(a - 3b)$ ✓
= $(a - 3b)(3a + 2b)$ ✓
8. $4c^2 - 20cd + cd - 5d^2$ ✓
= $(4c^2 - 20cd) + (cd - 5d^2)$ ✓
= $4c(c - 5d) + d(c - 5d)$ ✓
= $(c - 5d)(4c + d)$ ✓
9. $10x^2 - 15xy - 12xy + 18y^2$ ✓
= $(10x^2 - 15xy) - (12xy - 18y^2)$ ✓
= $5x(2x - 3y) - 6y(2x - 3y)$ ✓
= $(2x - 3y)(5x - 6y)$ ✓
10. $6m^2 - 9mn + 2mn - 3n^2$ ✓
= $(6m^2 - 9mn) + (2mn - 3n^2)$ ✓
= $3m(2m - 3n) + n(2m - 3n)$ ✓
= $(2m - 3n)(3m + n)$ ✓

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