

Simplifying Algebraic Expressions by Factoring

1 $x^2 + 2xy + 5x^3 + 10x^2y$

2 $6x^2 - x - 12$

3 $9a^2b + 3a^2 + 3ab^2 + ab$

4 $x^2 - 14x + 49$

5 $x^2 + 7x + 10$

6 $x^3 - 6x^2 + 12x - 8$

7 $3x^2 + 6x - 240$

8 $2x^3 - 14x^2 + 24x$

9 $6x^2 + 21x - 27$

10 $20x^2 + 195x + 280$

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Answers

1 $x^2 + 2xy + 5x^3 + 10x^2y$

$x(1 + 5x)(x + 2y)$

2 $6x^2 - x - 12$

$(2x - 3)(3x + 4)$

3 $9a^2b + 3a^2 + 3ab^2 + ab$

$a(3b + 1)(3a + b)$

4 $x^2 - 14x + 49$

$(x - 7)^2$

5 $x^2 + 7x + 10$

$(x + 2)(x + 5)$

6 $x^3 - 6x^2 + 12x - 8$

$(x - 2)^3$

7 $3x^2 + 6x - 240$

$3(x + 10)(x - 8)$

8 $2x^3 - 14x^2 + 24x$

$2x(x - 3)(x - 4)$

9 $6x^2 + 21x - 27$

$3(2x + 9)(x - 1)$

10 $20x^2 + 195x + 280$

$5(x + 8)(4x + 7)$
