

Combine Like Terms, Use Distributive Property Worksheet Answer Key

Fact or Fiction: Factorials Have Nothing to Do With Factoring

Simplify.

$$\begin{aligned} 1. \quad & 4xy + 3x^2y - 3xy + 2x^2y \\ &= (4 - 3)xy + (3 + 2)x^2y \\ &= xy + 5x^2y \end{aligned}$$

$$\begin{aligned} 2. \quad & 3x^2 + 4x - 6x - 2x^2 \\ &= (3 - 2)x^2 + (4 - 6)x \\ &= x^2 - 2x \end{aligned}$$

$$\begin{aligned} 3. \quad & 4mn - 6n^2 + 2mn \\ &= -6n^2 + (4 + 2)mn \\ &= -6n^2 + 6mn \end{aligned}$$

$$\begin{aligned} 4. \quad & 16xy + 6x - 4m - (4xy - 3m) \\ &= 16xy + 6x - 4xy + 3m \\ &= 12xy + 6x - m \end{aligned}$$

$$\begin{aligned} 5. \quad & 8a + 4b + 6 - (3a + 2b + 4) \\ &= 8a + 4b + 6 - 3a - 2b - 4 \\ &= 5a + 2b + 2 \end{aligned}$$

Use the distributive property to simplify.

$$\begin{aligned} 6. \quad & -2(x + 4) \\ &= -2x - 8 \end{aligned}$$

$$\begin{aligned} 7. \quad & 4x(x^2 + 3) \\ &= 4x^3 + 12x \end{aligned}$$

$$\begin{aligned} 8. \quad & 3x(-4 + 5y) \\ &= -12x + 15xy \end{aligned}$$

$$\begin{aligned} 9. \quad & -6a(4b + c) \\ &= -24ab - 6ac \end{aligned}$$

$$\begin{aligned} 10. \quad & 4x^2(-3x + 2) \\ &= -12x^3 + 8x^2 \end{aligned}$$

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