

1.2 Multiplying Polynomials

Day 2 03/24/2015

Problem 1 Using the Distributive Property

What is a simpler form of $(2x + 4)(3x - 7)$?

Distribute: multiply terms

$$\textcircled{1} \quad 2x(3x - 7) + 4(3x - 7)$$

$$\textcircled{2} \quad 6x^2 - 14x + 12x - 28$$

$$\textcircled{3} \quad \boxed{6x^2 - 2x - 28}$$

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What is a simpler form of $(x - 6)(4x + 3)$?

$$x(4x + 3) - 6(4x + 3)$$

$$4x^2 + 3x - 24x - 18$$

$$\boxed{4x^2 - 21x - 18}$$

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$$\begin{array}{r} 42 \\ \times 16 \\ \hline 252 \\ + 420 \\ \hline 672 \end{array}$$

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Problem 2 Using a Table

What is a simpler form of $(x - 3)(4x - 5)$?

$$\begin{array}{r}
 x - 3 \\
 \times x - 5 \\
 \hline
 -5x + 15 \\
 4x^2 - 12x \\
 \hline
 4x^2 - 17x + 15
 \end{array}$$

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Problem 5 Multiplying a Trinomial and a Binomial

What is a simpler form of $(3x^2 + x - 5)(2x - 7)$?

$$\begin{array}{r}
 3x^2 + x - 5 \\
 \times 2x - 7 \\
 \hline
 -21x^2 - 7x + 35 \\
 6x^3 + 2x^2 - 10x \\
 \hline
 6x^3 - 19x^2 - 17x + 35
 \end{array}$$

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$$\begin{array}{r}
 (2x^2 - 3x + 4)(x + 7) \\
 x + 7 \\
 \hline
 3 4x^2 - 21x + 28 \\
 2x^3 - 3x^2 + 4x \\
 \hline
 2x^3 + 11x^2 - 17x + 28
 \end{array}$$

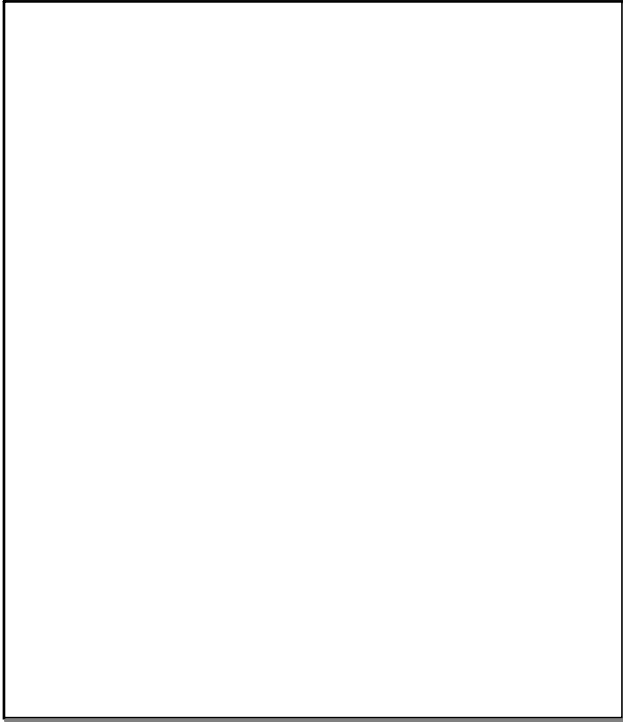
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Exit Slip:

1. What is one thing you did not understand today?
2. What would be one way to help you better understand multiplying polynomials?
3. Solve the problem:

$$(x^2 + 2x - 1)(x - 10)$$

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