Algebra 1

Chapter 1

Section 1-7

May 13-10:02 PM

Concepts

11 x 4ab

- Term - Number, variable or product of a number and/or variables, separated by a "+" or "−".
- Constant - Term with no variable
- Coefficient - The number part of a term with a variable
- Like Terms - Terms with exactly the same variable parts

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Identifying Parts of an Expression

$30y + 17x^3 - 3x - 6x$

- Terms 4 different Terms: $30y$, $17x^3$, $-3x$, $-6x$
- Constants None
- Coefficients $30, 17, -3, -6$
- Like Terms
  - Combine Like Terms $-3x, -6x \rightarrow$ simplified $-9x$

$30y + 17x^3 - 9x$

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Identifying Parts of an Expression

$7x^3 - 31 + 6x^3$

- Terms (3) $7x^3$, -31, $6x^3$
- Constants -31
- Coefficients $7, 6$
- Like Terms
  - Combine Like Terms $7x^3, 6x^3 \rightarrow 13x^3$

$13x^3 - 31$

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Identifying Parts of an Expression

$1 + 8a + 2b - 9c + 1abc + 1b$

- Terms (6) $1, 8a, 2b, -9c, abc, b$
- Constants 1
- Coefficients $8, 2, -9, 1, 1$
- Like Terms
  - Combine Like Terms $2b, b \rightarrow 3b$

$1 + 8a + 3b - 9c + abc$

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Distributive Property

$a(b + c) = ab + ac$

$(b + c)a = ab + ac$

$a(b - c) = ab - ac$

$(b - c)a = ab - ac$

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Simplifying with the Distributive Property

$-3(x + 3)$

$-3x - 9$

$a(1 - b)$

$a - ab$

$9(y + 19z)$

$9y + 9 \cdot 19z$

$9y + 171z$

$11(7k - 1) + 15$

$77k - 11 + 15$

$77k + 4$

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Negatives with the Distributive Property

$-(15 - v)$

$-15 + v$

$-(8g + 9)$

$-8g - 9$

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Reversing the Distributive Property

"Undistributing"

11h - 11j

$11(h-j)$

8p + pk

$p(8+k)$

$(8+k)p$

$(k+8)p$

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Multiplying Fractions

$$\frac{a}{b} \cdot \frac{c}{d} = \frac{ac}{bd}$$

Aug 29-7:20 AM

Rewriting Fraction Expressions

$\frac{7x+y}{5}$ — Write fraction form

$\frac{1}{5}(7x+y)$ — Write as multiplication

$\frac{1}{5}(7x) + \frac{1}{5}(y)$ — Distributive Property

$\frac{7x}{5} + \frac{y}{5}$ — Simplify each term

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Rewrite the Fraction as the Sum of Three Terms

$$\frac{11s + 10d - 5}{5m}$$

$\frac{11s}{5m} + \frac{10d}{5m} - \frac{5}{5m}$ ÷5 ÷5 ÷5

$\frac{11s}{5m} + \frac{2d}{m} - \frac{1}{m}$

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