

Simplify

$$(3x-5)(4x+6) = 12x^2 - 2x - 30$$

type in middle coefficient

Conjugates

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

$$25x^2 - 4$$

Binomial Square

$$(\underbrace{5x+2}^2)(5x+2)$$

$$25x^2 + 20x + 4$$

10.3 (day 1)

Factor

$$12 = 2 \cdot 6$$

$$12 = 4 \cdot 3$$

$$12 = 1 \cdot 12$$

Algebra

=

Prime factor

$$12 = 2 \cdot 2 \cdot 3 = 2^2 \cdot 3$$

$$\begin{array}{c}
 \wedge \\
 2 \cdot 6 \\
 \wedge \\
 2 \cdot 3
 \end{array}$$

Simplify

$$3x(x+2) \rightarrow 3x^2 + 6x$$

$$3x^2 + 6x \rightarrow 3x(x+2)$$

Factor

$$15x^4y^3 - 20x^2y^5 + 10x^3y^3$$

Factor

$5x^2y^3$

$$5x^2y^3(3x^2 - 4y^2 + 2x)$$

16. $14xy - 10xz + 8xz$

17. $15x^3y^6 - 9x^4y^4 + 12x^2y^5$

18. $15x^4y^6 - 3x^3y^5 + 12x^4y^4$

fact

$$3x^3y^4(5x^2y^2 - 3x + 4/y)$$

$$3x^3y^4(5x^2y^2 - 3x + 4/y)$$

$$\frac{5x^{3n}}{5x^{2n}} - \frac{10x^{2n}}{5x^{2n}}$$

$$5x^{2n} (x^n - 2)$$

$$12x^{4n} + 16x^n$$

$$4x^n (3x^{3n} + 4)$$

1.

$$4(x+3) + y(x+3)$$

$$4 \square + y \square$$

$$\square(4+y)$$

$$(x+3)(4+y)$$

$$a(b-7) - b(b-7)$$

$$(b-7)(a-b)$$

Factor

10.3 $\rightarrow$ 1, look for GCF

2. Count the # terms

2-terms $<$

3-terms $<$

10.3 4-terms $<$ factor by grouping

Factor

(38)

$$38. \quad x(y - 9) - 5(y - 9)$$

$$39. \quad 3x(x + y) - 1(x + y)$$

(39)

$$3x(x + y) - 1(x + y)$$

$$(x + y)(3x - 1)$$

$$(3x - 1)(x + y)$$

$$(y - 9)(x - 5)$$

Q: $xy + 5x - 3y - 15$ Page 2

$\rightarrow x(\underline{y+5}) - 3(\underline{y+5})$

$$(y+5)(x-3)$$

Factor

47. $x^2 + 7x - 4x - 28$

48. $x^2 + 3x - 5x - 15$

(47)

$$x^2 + 7x - 4x - 28$$

$$\rightarrow x(x+7) - 4(x+7)$$

$$(x+7)(x-4)$$

$$x^2 + 3x - 5x - 15$$

$$x(x+3) - 5(x+3)$$

$$(x+3)(x-5)$$

50. $x^3 - 2x^2 + 5x - 10$

51. $xy - 6x + 2y - 12$

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50

$$x^3 - 2x^2 + 5x - 10$$

$$x^2(x-2) + 5(x-2)$$

$$(x^2 + 5)(x - 2)$$

Day 2

51

$$x(y-6) + 2(y-6)$$

Factor

1. look for a GCF
- 2.