Algebra II

Factoring GCF and trinomials a≠1

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Number the Quadrants

Label the x and y-axis

Find the plotted points

A $(5, -1)$
B $(0, -5)$
C $(-4, -2)$
D $(3, 0)$

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Bell Ringer

Use $3x^2 + 2x - 8$, instead of the product of c and sum of b, you must multiply a times c for the product and sum of b.

Find the values.

A   C

AC   B
-24 $\frac{}{2}$

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$3x^2 + 2x - 8$ **(Factor by grouping)**

replace

$(3x^2 + 6x) + (-4x - 8)$

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

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

-24 2
$-8 \cdot 3$
$-6 \cdot 4$
$6 \cdot -4$

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$4x^2 + 8x + 3$

replace

$(4x^2 + 6x) + (2x + 3)$

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

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

$\dfrac{AC}{12}$ $\begin{array}{c} B \\ 8 \end{array}$

$6 \cdot 2$

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$16v^2 - 48v + 20$

$4(4v^2 - 12v + 5)$

replace

$(4v^2 - 10v) + (2v + 5)$

$2v(2v - 5) - 1(2v - 5)$

$4(2v - 5)(2v - 1)$

$\dfrac{AC}{20}$ $\begin{array}{c} B \\ -12 \end{array}$

$-10 \cdot -2$

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$16n^3 - 44n^2 - 12n$

$4n(4n^2 - 11n - 3)$

replace

$(4n^2 - 12n) + (1n - 3)$

$4n(n - 3) + 1(n - 3)$

$4n(n - 3)(4n + 1)$

$\dfrac{AC}{-12}$ $\begin{array}{c} B \\ -11 \end{array}$

$-12 \cdot 1$

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$16n^2 + 84n + 80$

$4(4n^2 + 21n + 20)$

replace

$(4n^2 + 16n) + (5n + 20)$

$4n(n + 4) + 5(n + 4)$

$4(n + 4)(4n + 5)$

$\dfrac{AC}{80}$ $\begin{array}{c} B \\ 21 \end{array}$

$5 \cdot 16$

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2

$6b^2 - b - 12$

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$6x^3 - 19x^2 + 10x$

$\frac{AC}{60} \quad \frac{B}{-19}$

$x(6x^2 - 19x + 10)$

$(6x^2 - 4x)(15x + 10) \quad \boxed{-4 \cdot -15}$

$2x(3x-2) - 5(3x-2)$

$\rightarrow x(3x-2)(2x-5)$

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$6k^2 + 17k - 14$

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Conclusion

1. Write down the steps to find the numbers to work with a number other than 1 for a.

2. How do you factor by grouping?

3. ?????s

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Assignment

Factoring GCF and Trinomial with a not equal to 1 Worksheet

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