

1.3 Factoring Polynomials

Day 3

3/25/15

(+) in the back

Both sets will have the same sign. They will take the sign in the middle.

(-) in the back

One sign will be positive and the other negative. The sign in the middle will go to the bigger number

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factored form of $x^2 + 8x + 15$?

Steps:

1. List all #'s that multiply to back term
2. Choose a pair that add to middle term
3. Split the x and pair of #'s

$$\begin{array}{l} \textcircled{1} \quad \frac{15}{1 \quad 15} \\ \textcircled{2} \quad \frac{3 \quad 5}{} \end{array}$$

$$\textcircled{3} \quad (x + 3)(x + 5)$$

$r^2 + 11r + 24$?

$$(r + 3)(r + 8)$$

$$\begin{array}{l} 24 \\ \hline 1 \quad 24 \\ 2 \quad 12 \\ \hline \textcircled{3 \quad 8} \\ 4 \quad 6 \end{array}$$

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Factor the following: $k^2 - 5k + 6$

$(k-2)(k-3)$

$\begin{array}{r} 6 \\ 1 \quad 6 \\ \hline 2 \quad 3 \end{array}$

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What is the factored form of each polynomial?

$n^2 + 9n - 36$

$(n+12)(n-3)$

$\begin{array}{r} 36 \\ \hline 1 \quad 36 \\ 2 \quad 18 \\ \hline 3 \quad 12 \\ 4 \quad 9 \\ 6 \quad 6 \end{array}$

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What is the factored form of each polynomial?

$c^2 - 4c - 21$

$(c+3)(c-7)$

$\begin{array}{r} 21 \\ \hline 1 \quad 21 \\ \hline 3 \quad 7 \end{array}$

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