

DO NOW

Pick up Worksheet - Factor Trinomials and complete.

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7.3 Factoring Trinomials - Continued

$$\begin{array}{r|rr} 1,3 & 1,4 & \\ 2,2 & 2,2 & \\ \hline 3x^2 & 4 & \\ 1x & 2 & 2x \\ \hline 3x & 2 & 6x \\ & & 8x \checkmark \end{array}$$

$$3x^2 + 8x + 4$$

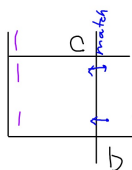
$$(x + 2)(3x + 2)$$

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$a = 1$ ← coefficient in front of squared term

Shortcut

Find 2 numbers whose
Product = C and
Sum = b



Examples:

1. $x^2 + 4x + 3$ Product = 3
Sum = 4
 $a = 1$
 $(x + 1)(x + 3)$

2. $x^2 - 2x - 3$ Product = -3
Sum = -2
 $a = 1$
 $(x + 1)(x - 3)$

3. $a^2 - 2a - 8$ P = -8
S = -2
 $(a + 2)(a - 4)$

4. $b^2 + 3b - 10$ P = -10
S = 3
 $(b - 2)(b + 5)$

If $a \neq 1$...

5. $2x^2 - 9x + 4$

* CANNOT use shortcut

$(2x - 1)(x - 4)$

$$\begin{array}{r|rr} 1,2 & 1,4 & \\ 2,2 & 2,2 & \\ \hline 2 & 4 & \\ 1 & -1 & -1 \\ \hline 2 & -4 & -8 \\ & & -9 \checkmark \end{array}$$

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6. $3x^2 + 10x + 7$

$(3x + 7)(x + 1)$

$$\begin{array}{r|rr} 3 & 7 & \\ 3 & 1 & 3 \\ \hline 1 & 7 & 7 \\ & & 10 \checkmark \end{array}$$

7. $5b^2 + 3b - 14$

$(b + 2)(5b - 7)$

$$\begin{array}{r|rr} 5 & -14 & \\ 1 & -7 & -7 \\ \hline 5 & 2 & 10 \\ & & 3 \checkmark \end{array}$$

HOMework

Worksheet - HW 7.3

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