

April 11, 2016  
 \* Factoring Quiz Wednesday

Apr 11-9:03 AM

$$\begin{aligned}
 & -x^2 + 4x + 21 \\
 & \text{Note: } a = -1 \\
 & \text{Factor out } a(-1) \text{ from the whole trinomial} \\
 & -(x^2 - 4x - 21) \quad \begin{array}{l} ac = -21 \\ r = -4 \end{array} \\
 & \quad \quad \quad \text{factor as normal} \quad \begin{array}{r} + \\ + \\ \hline 7 \\ 3 \end{array} \\
 & -[(x^2 - 7x + 3x - 21)] \\
 & -[x(x-7) + 3(x-7)] \\
 & -[(x-7)(x+3)] \\
 & \text{ck} \\
 & (x-7)(x+3) = 0 \\
 & \begin{array}{l} \text{① } -x+7=0 \\ \quad -x=-7 \\ \quad \quad x=7 \\ \text{② } x+3=0 \\ \quad \quad x=-3 \end{array} \quad \begin{array}{l} x=7 \quad -x^2+4x+21 \\ -(7)^2+4(7)+21 \\ -(49)+28+21 \\ \quad -21+21 \\ \quad \quad 0 \\ x=3 \\ -(3)^2+4(3)+21 \\ -9+12+21 \\ \quad -21+21 \\ \quad \quad 0 \end{array}
 \end{aligned}$$

Apr 11-9:29 AM

6.4

Factoring Trinomials of the form  $ax^2 + bx + c = 0$  where  $a \neq 1$

$$\begin{aligned}
 & 3x^2 + 31x + 10 \quad \begin{array}{l} ac = 3 \cdot 10 = 30 \\ r = 31 \end{array} \\
 & \quad \quad \quad \begin{array}{r} + \\ + \\ \hline 30 \\ 1 \end{array} \\
 & 3x^2 + 30x + x + 10 \\
 & 3x(x+10) + 1(x+10) \\
 & (x+10)(3x+1) \\
 & \text{ck} \\
 & 3x^2 + x + 30x + 10 \\
 & 3x^2 + 31x + 10 \checkmark
 \end{aligned}$$

Apr 11-9:43 AM

$$\begin{aligned}
 & x^2 + 7x + 12 \quad ac = 12 \quad r = 7 \\
 & \quad \quad \quad \begin{array}{r} + \\ + \\ \hline 4 \\ 3 \end{array} \\
 & x^2 + 4x + 3x + 12 \\
 & x(x+4) + 3(x+4) \\
 & (x+4)(x+3)
 \end{aligned}$$

Apr 11-9:44 AM