

### 5.3 Day 2

Factor:  $\underline{6}x^2 + \underline{11}x + \underline{3}$

$$\begin{array}{c} 18 \\ \wedge \\ 9 \quad 2 \end{array}$$

$$(6x^2 + 9x) + (2x + 3)$$

$$\underline{3x(2x+3)} + \underline{1(2x+3)}$$

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

Nov 12-10:29 AM

Factor:  $\underline{3}x^2 + \underline{11}x - \underline{20}$

$$\begin{array}{c} -60 \\ \wedge \\ -4 \quad 15 \end{array}$$

$$(3x^2 - 4x) + (5x - 20)$$

$$x(3x-4) + 5(3x-4)$$

$$(3x-4)(x+5)$$

Factor:  $\underline{2}x^2 + \underline{7}x - \underline{15}$

$$\begin{array}{c} -30 \\ \wedge \\ -3 \quad 10 \end{array}$$

$$(2x^2 - 3x) + (10x - 15)$$

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

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

Nov 12-10:43 AM

Difference of 2 squares:  $a^2 - b^2$

$$\begin{array}{l}
 x^2 - 16 \\
 \begin{array}{cc}
 x \cdot x & 4 \cdot 4 \\
 \hline
 x^2 + 0x - 16 \\
 \hline
 (x-4)(x+4)
 \end{array}
 \end{array}$$

$$\begin{array}{c}
 -16 \\
 -4 \wedge 4
 \end{array}$$

$$\begin{array}{l}
 x^2 - 49 \\
 \begin{array}{cc}
 x \cdot x & 7 \cdot 7 \\
 \hline
 (x-7)(x+7)
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 x^4 - 25 \\
 \begin{array}{cc}
 x^2 \cdot x^2 & 5 \cdot 5 \\
 \hline
 (x^2-5)(x^2+5)
 \end{array}
 \end{array}$$

~~$x^2 + 16$~~   
 ~~$x^2 + 0x + 16$~~   
 Does not Factor

Nov 12-10:48 AM

$$\begin{array}{l}
 4x^2 - 24x + 36 \\
 4(x^2 - 6x + 9) \\
 4(x-3)(x-3) \\
 4(x-3)^2
 \end{array}$$

$$\begin{array}{c}
 9 \\
 -3 \wedge -3
 \end{array}$$

Nov 12-10:53 AM

$$9x^2 - 49$$

$3x \cdot 3x \quad 7 \cdot 7$

$$(3x - 7)(3x + 7)$$

$$3x^2 + 6x + 3$$
$$3(x^2 + 2x + 1)$$
$$3(x+1)(x+1)$$
$$3(x+1)^2$$

Nov 12-10:55 AM