

Home

Realtor

Algebra ALEKS Topics

Algebra Notes

Algebra Reviews

MAT0028

MAC1105

MGF ALEKS Topics

MGF Reviews

MGF Notes

STA2023

Stats ALEKS Topics

Stats Notes

Stats Reviews

Algebra Notes / Factoring

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

FOIL

$$\begin{array}{r} x^2 + 3x \\ -2x - 6 \\ \hline x^2 + x - 6 \end{array}$$

$$\begin{array}{r} x^2 + 3x - 6 \\ (x-2)(x+3) \end{array}$$

Factoring

$$\begin{array}{r} x^2 - 7x - 18 \\ (x-9)(x+2) \end{array}$$

$$\begin{array}{r} -9 \\ +2 \\ \hline -7 \end{array}$$

$$\begin{array}{r} 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \\ 18 \end{array}$$

FOIL to check answer

$$\begin{array}{r} 5x^2 - 33x + 18 \\ (5x-10)(5x-3) \end{array}$$

$$\begin{array}{r} 5x+18 \\ +10 \\ -30 \\ -32 \end{array}$$

Always check for GCF

$$\begin{array}{r} 90 \\ 180 \\ 270 \\ 360 \end{array}$$

$$(x-6)(5x-3)$$

$$\begin{array}{r} 3x^2 - 29x + 18 \\ (3x-2)(3x-9) \end{array}$$

$$\begin{array}{r} 3x+18 \\ -29 \\ -27 \end{array}$$

$$\begin{array}{r} 54 \\ 108 \\ 162 \end{array}$$

$$(3x-2)(x-9)$$

$$\begin{array}{r} 6x^2 - 19x + 15 \\ (6x-9)(6x-10) \end{array}$$

$$\begin{array}{r} 6x+15 \\ -19 \\ -14 \end{array}$$

$$\begin{array}{r} 90 \\ 180 \\ 270 \\ 360 \end{array}$$

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

$$\begin{array}{r} -4x^2 - 28x - 48 \\ -4 \end{array}$$

$$-4(x^2 + 7x + 12)$$

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

$$\begin{array}{r} 12 \\ 12 \\ 12 \end{array}$$

Always check for GCF

Look out for negative in front

$$16x^2 - 49$$

$$(4x+7)(4x-7)$$

Really when it's 2 terms, it's quite

Look for perfect squares

$$\begin{array}{r} 1^2=1 \\ 2^2=4 \\ 3^2=9 \\ 4^2=16 \end{array} \quad \begin{array}{r} 5^2=25 \\ 6^2=36 \\ 7^2=49 \\ 8^2=64 \end{array}$$

$$9x^2 - 64y^2$$

$$(3x + 8y)(3x - 8y)$$

$$3x^2 + 10xy - 25y^2$$

$$(3x - 5y)(3x + 15y)$$

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

$$\begin{array}{r} 3x - 25 \\ \times 5 \\ \hline 15x - 125 \end{array}$$

$$\begin{array}{r} 3x - 25 \\ \times 5 \\ \hline 15x - 125 \end{array}$$

$$x^2 - 6x - 16 = 0$$

$$(x + 2)(x - 8) = 0$$

$$\begin{array}{r} -6 \\ \times -8 \\ \hline 48 \end{array}$$

$$x + 2 = 0$$

$$x = -2$$

$$x - 8 = 0$$

$$x = 8$$

$$x = -2 \quad x = 8$$

can plug back in to original equation