

<p>Split the middle term</p> <p>$ax^2 + bx + c$</p> <p>1st multiply a and c together.</p> <p>2nd find numbers that multiply to get the product from above that add to get b.</p> <p>3rd replace (or split) the middle term with the 2 numbers from step 2.</p> <p>4th Group the first 2 terms together and group the second terms together</p> <p>5th Find the GCF of each set of Parenthesis</p> <p>6th Write as a product of linear factors</p>	<p>$4x^2 + 9x + 2$</p> <p>$4 \cdot 2 = \frac{8}{1 \cdot 8}$</p> <p>$(4x^2 + 1x) + (8x + 2)$</p> <p>$x(4x+1) + 2(4x+1)$</p> <p>$(4x+1)(x+2)$</p> <p>$9x^2 + 12x + 4$</p> <p>$\frac{36}{6 \cdot 6}$</p> <p>$(9x^2 + 6x) + (6x + 4)$</p> <p>$3x(3x+2) + 2(3x+2)$</p> <p>$(3x+2)(3x+2)$</p> <p>$(3x+2)^2$</p> <p>$4x^2 - 4x - 35$</p>	<p>$6x^2 - 11x + 4$</p> <p>$6 \cdot 4 = \frac{24}{-8 \cdot -3}$</p> <p>$(6x^2 - 8x) + (-3x + 4)$</p> <p>$2x(3x-4) - 1(3x-4)$</p> <p>$(2x-1)(3x-4)$</p> <p>$12x^2 - 25x + 7$</p> <p>$(12x^2 - 4x) + (-21x + 7)$</p> <p>$4x(3x-1) - 7(3x-1)$</p> <p>$(4x-7)(3x-1)$</p> <p>$6x^2 + 13x - 25$</p>	<p>$\frac{24}{-8 \cdot -3}$</p> <p>$\frac{84}{-4 \cdot -21}$</p>
	<p>$4x^2 - 9$</p>	<p>$25x^2 - 10x + 4$</p>	

<p>Both GCF and Split the middle term</p> <p>$(4x-20)(x+2)$</p> <p>$(2x-5)(2x+4)$</p>	<p>$4x^2 - 2x - 20$ $\frac{-20}{-5 \cdot 4}$</p> <p>$2(2x^2 - x - 10)$</p> <p>$(2x^2 - 5x) + (1x - 10)$</p> <p>$x(2x-5) + 2(2x-5)$</p> <p>$2(2x-5)(x+2)$</p> <p>$8x^2 - 28x - 60$ $\frac{-30}{-10 \cdot 3}$</p> <p>$4(2x^2 - 7x - 15)$</p> <p>$(2x^2 - 10x) + (3x - 15)$</p> <p>$2x(x-5) + 3(x-5)$</p> <p>$4(x-5)(2x+3)$</p> <p>$112x^2 - 168x + 63$</p>	<p>$-3x^2 + 12x + 15$</p> <p>$18x^2 - 2$</p>
<p>Solving</p> <p>1st factor</p> <p>2nd Set linear factors equal to zero</p> <p>3rd Solve each linear equation</p>	<p>$x^2 - 3x - 4 = 0$</p>	<p>$x^2 + 2x - 35 = 0$</p>