

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

Solving Continued

$$5x^2 - 13x + 6 = 0 \quad \frac{30}{-10 \cdot -3}$$

$$(5x^2 - 10x)(-3x + 6) = 0$$

$$5x(x-2) - 3(x-2) = 0$$

$$(5x-3)(x-2) = 0$$

$$5x-3=0 \quad x-2=0$$

$$5x=3 \quad x=2$$

$$x = \frac{3}{5} \quad x = 2$$

$$-3x^2 + 3x + 90 = 0$$

$$\frac{-3(x^2 - x - 30)}{-3} = \frac{0}{-3}$$

$$x^2 - x - 30 = 0$$

$$(x-6)(x+5) = 0$$

$$x-6=0 \quad x+5=0$$

$$x=6 \quad x=-5$$

$$5x^2 - 25 = 4x^2 + 24$$

$$x^2 - 25 = 24$$

$$x^2 - 49 = 0$$

$$(x-7)(x+7) = 0$$

$$x-7=0 \quad x+7=0$$

$$x=7 \quad x=-7$$

$$16x^2 = 8x - 1$$

$$16x^2 - 8x + 1 = 0$$

$$(4x-1)(4x-1) = 0$$

$$4x-1=0 \quad 4x-1=0$$

$$x = \frac{1}{4}$$

$$8x^2 - 6x - 5 = 0$$

$$(8x^2 - 10x) + (4x - 5) = 0$$

$$2x(4x-5) + 1(4x-5) = 0$$

$$(2x+1)(4x-5) = 0$$

$$2x+1=0 \quad 4x-5=0$$

$$x = -\frac{1}{2} \quad x = \frac{5}{4}$$

$$x^2 + 7x = 0$$

$$x(x+7) = 0$$

$$x=0 \quad x+7=0$$

$$x = -7$$

$$2x^2 + 4x - 1 = 7x^2 - 7x + 1$$

$$0 = 5x^2 - 11x + 2$$

$$(5x-1)(x-2) = 0$$

$$5x-1=0 \quad x-2=0$$

$$x = \frac{1}{5} \quad x = 2$$

$$6x^2 - 10x - 4 = 0$$

$$3x^2 - 5x - 2 = 0$$

$$(3x+1)(x-2) = 0$$

$$3x+1=0 \quad x-2=0$$

$$x = -\frac{1}{3} \quad x = 2$$