Steps when factoring:

1. Take out GCF.
2. Factor what remains if possible.
   a. If there are only two terms look for the Difference of Perfect Squares
   b. If there are three terms .....

Factor. $6x^2 - x - 12$

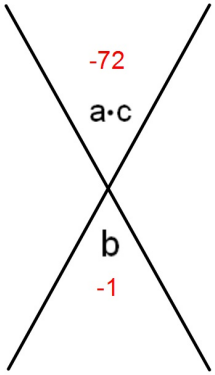
$= (\quad)(\quad)$

Factoring Quadratics: $6x^2 - x - 12$

a = 6

b = -1

c = -12



Factoring Quadratics: $6x^2 - x - 12$

a = 6

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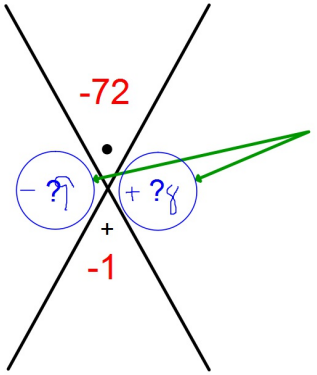
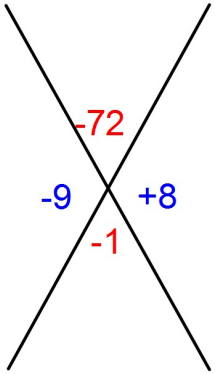


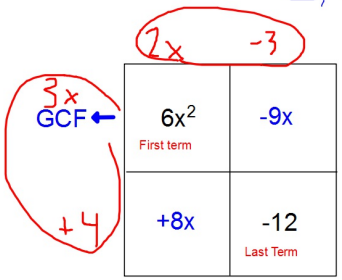
Find two numbers that

Multiply to -72 and add to -1

$6x^2 - x - 12 = (2x - 3)(3x + 4)$

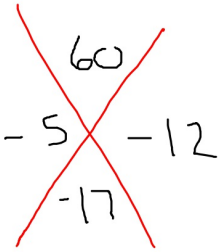
GCF

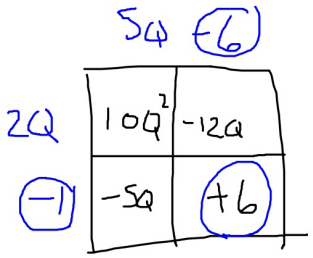




Factor $10Q^2 - 17Q + 6 = (5Q - 6)(2Q - 1)$

Look for GCF First!

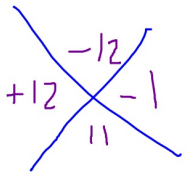


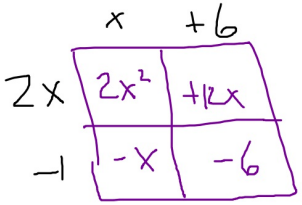


Factor: $6x^2 + 33x - 18 = 3(x + 6)(2x - 1)$

Look for GCF First!

$3(2x^2 + 11x - 6)$

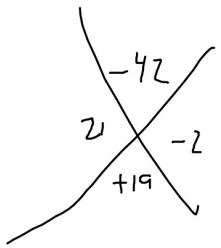




Factor each:

1. $6x^2 + 19x - 7$
2. $4x^2 - 16x + 15$
3. $x^2 + 11x + 24$
4. $x^2 - 5x - 36$

1. $6x^2 + 19x - 7$

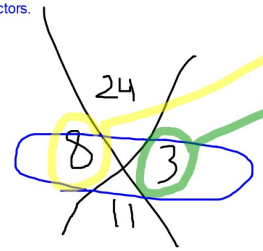


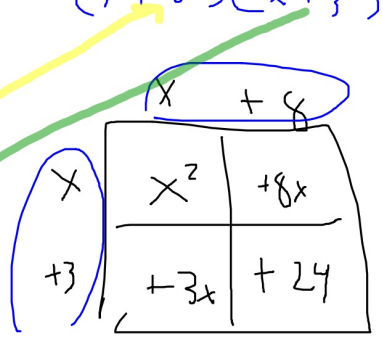
$(3x - 1)(2x + 7)$

2. $4x^2 - 16x + 15$

3. $1x^2 + 11x + 24 = (x+8)(x+3)$

If leading coefficient is 1 (a=1) then the numbers found using the X become the constants in the factors.





4. $x^2 - 5x - 36$ $(x+4)(x-9)$