Common Factor

$5p^2q - 50p^6q^3 + 35p^3$

$5p^2(q - 10p^4q^3 + 7p)$

$14x^2y^3z - 21x^3y^4z + 42xyz^2$

$7xyz(2xy^2 - 3x^2y^3 + 6z)$

Oct 15-8:38 AM

x^2-3x-4

y^4+11y^2+30

Trinomials

$z^2+5zy+6y^2$

$m^2-8m+16$

Feb 6-11:22 PM

Expand:

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

$x^2+x+2x+2$

x^2+3x+2

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

$x^2-4x+5x-20$

x^2+x-20

$(x-7)(x-1)$

$x^2-x-7x+7$

x^2-8x+7

2

Factor the following

1. $x^2+19x+18$ ← simple trinomial $(1x^2)$

$1+18=19$

$1 \times 18 = 18$

$(x+1)(x+18)$ ← two binomials

or

$(x+18)(x+1)$

18
1 x 18
2 x 9
3 x 6

3

2. x^2-5x+6 ← simple trinomial $(1x^2)$

$-2+-3=-5$

$-2 \times -3 = 6$

$(x-2)(x-3)$ ← two binomials

6
-1 x -6
-2 x -3

3

3. $x^2+5x-24$

$\_+\_=$

$\_\times\_=$

$x^2+7x+12$

$\_+\_=$

$\_\times\_=$

x^2+x-6

$\_+\_=$

$\_\times\_=$

4

4. $3x^2-18x-120$ $\_^{+}\_ = \_^{x}\_ =$

4

Rules of the road...

x^2+5x-6

Sign of the biggest number is positve.

Signs are different.

x^2-5x+6

both signs are negative

Signs are the same.

4

Check out a few on your own.

Oct 26-12:40 PM

$2x^2+7x+3$ $\_^{+}\_ = \_^{x}\_ =$

Mar 27-4:33 PM

$5x^2+34x-7$ $\_^{+}\_ = \_^{x}\_ =$

Mar 27-4:33 PM

$6x^2-7x+2$ $\_^{+}\_ = \_^{x}\_ =$

Mar 27-4:33 PM

$8x^2+10x-3$ $\_+\_=$ $\_\times\_=$

Mar 27-4:33 PM

Check out the sheet. :)

Mar 30-5:59 PM

Expand:

$(3x+2)(x+1)$	$(2x+5)(3x-4)$	$(2x-7)(x-1)$
$3x^2+3x+2x+2$	$6x^2-8x+15x-20$	$2x^2-2x-7x+7$
$3x^2+5x+2$	$6x^2+7x-20$	$2x^2-9x+7$

2

$2x^2+5x+3$

$(x+\frac{2}{2})(x+\frac{3}{2})$

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

$2 + 3 = 5$

$2 \times 3 = 6$

4

DECOMPOSITION

If there is a *numerical coefficient* in front of x , then we use a method for factoring called *DECOMPOSITION.*

$4x^2+5x-6$

Mar 15-9:22 PM

$2x^2+5x+3$

$2x^2+2x+3x+3$

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

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

4

Check out pages 167,177 and 178.

Numbers _____ , 13 and 15. :)

4