

April 8, 2016
 Sign Patterns of ax^2+bx+c , where a is always positive

① ax^2+bx+c ; Both numbers have the same "sign". Both numbers are positive
 $(x+3)(x+4)$
 $x^2+4x+3x+12$
 $x^2+7x+12$

② ax^2-bx+c ; Same sign, both neg
 $(x-3)(x-4)$
 $x^2-4x-3x+12$
 $x^2-7x+12$

③ ax^2+bx-c ; opposite signs, and the large number is positive
 $(x-3)(x+4)$
 $x^2+4-3x-12$
 x^2+x-12

④ ax^2-bx-c ; opposite signs, and the large number is negative
 $(x+3)(x-4)$
 $x^2-4x+3x-12$
 x^2-x-12

Apr 8-9:05 AM

① $y^2-12y+11$

② x^2+6x+8

③ x^2+5x+2 *Relatively Prime*
 $ac=1 \cdot 2 = 2$ $br=5$

+	+	ac	br
2	1	2	5
		✓	✗

④ a^4-2a^2-15
 $a^4-5a^2+3a^2-15$
 $a^2(a^2-5)+3(a^2-5)$
 $(a^2-5)(a^2+3)$
 $a^4+3a^2-5a^2-15$
 a^4-2a^2-15 ✓

$ac=1 \cdot (-15) = -15$
 $br = -2$

-	+
5	3

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① $y^2-12y+11$ ac (product) = $1 \cdot 11 = 11$
 br (sum) = -12

-	-	ac	br
11	1	✓	✓

$y^2-11y-y+11$
 $y(y-11)-1(y-11)$
 $(y-11)(y-1)$

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② $b \cdot 3$ #1 -3b m3

Apr 8-9:49 AM