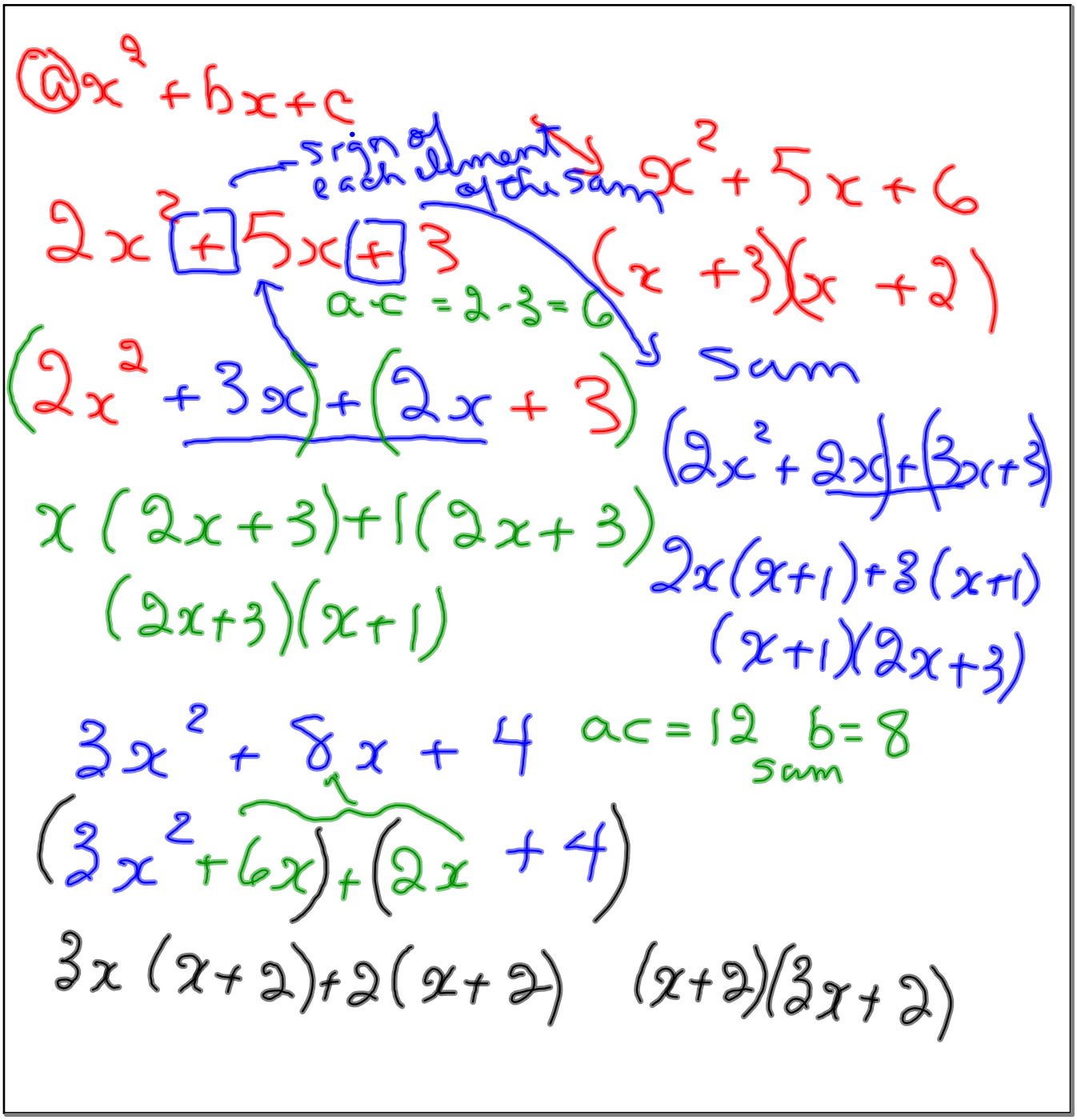
ax² + bx + c
sign of each element of the sum
2x² + 5x + 3
ac = 2 · 3 = 6
(2x² + 3x) + (2x + 3)
x(2x + 3) + 1(2x + 3)
(2x + 3)(x + 1)
x² + 5x + 6
(x + 3)(x + 2)
sum
(2x² + 2x) + (3x + 3)
2x(x + 1) + 3(x + 1)
(x + 1)(2x + 3)
3x² + 8x + 4
ac = 12
b = 8
sum
(3x² + 6x) + (2x + 4)
3x(x + 2) + 2(x + 2)
(x + 2)(3x + 2)

$x^2 + 7x + 12$

product = c

sum = b

$1 \cdot 12$

$2 \cdot 6$

$3 \cdot 4$

$(x+3)(x+4)$

$3x^2 + 22x + 7$

product = ac

sum = 22

$ac = 21$

$(3x^2 + 21x) + (1x + 7)$

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

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

$3x^2 + 1x + 21x + 7$

$6x^2 + 19x + 10$ $\quad ac = 60$ $\quad b = 19$ $\quad 15 \cdot 4$

$(6x^2 + 15x) + (4x + 10)$

$3x(2x + 5) + 2(2x + 5)$

$(2x + 5)(3x + 2)$

$4x^2 - 12x + 5$

$ac = 20$ $b = 12$

$10 \cdot 2$

$(4x^2 - 10x) + (-2x + 5)$

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

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

$x^2 - 9x + 20$

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

sum b

prod c

$7x^3 - 22x^2 + 3x$

$x(7x^2 - 22x + 3)$ $ac = 21$ $b = -22$

$1 \cdot 21$

$x(7x^2 - 1x - 21x + 3)$

$x[(7x^2 - 1x) + (-21x + 3)]$

$x[x(7x - 1) - 3(7x - 1)]$

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