tip: $Pacx^2 + P(ad + bc)x + Pbd$
$\quad = P\{acx^2 + (ad + bc)x + bd\}$
$\quad = P(ax + b)(cx + d)$

(1) $-20x^2 - 85x - 90$
$\quad = -5(4x^2 + 17x + 18)$
$\quad = -5(4x + 9)(x + 2)$

(2) $-15x^2 - 2x + 1$
$\quad = -(15x^2 + 2x - 1)$
$\quad = -(3x + 1)(5x - 1)$

(3) $4x^2 - 26x - 48$
$\quad = 2(2x^2 - 13x - 24)$
$\quad = 2(2x + 3)(x - 8)$

(4) $-16x^2 - 24x + 27$
$\quad = -(16x^2 + 24x - 27)$
$\quad = -(4x - 3)(4x + 9)$

(5) $-15x^2 + 2x + 45$
$\quad = -(15x^2 - 2x - 45)$
$\quad = -(3x + 5)(5x - 9)$

(6) $12x^2 + 27x$
$\quad = 3x(4x + 9)$

(7) $-2x^2 + 10x$
$\quad = -2x(x - 5)$

(8) $-8x^2 - 18x + 35$
$\quad = -(8x^2 + 18x - 35)$
$\quad = -(2x + 7)(4x - 5)$

(9) $12x^2 + 5x - 28$
$\quad = (3x - 4)(4x + 7)$

(10) $-5x^2 - 32x - 12$
$\quad = -(5x^2 + 32x + 12)$
$\quad = -(5x + 2)(x + 6)$

(11) $6x^2 + 2x - 48$
$\quad = 2(3x^2 + x - 24)$
$\quad = 2(3x - 8)(x + 3)$

(12) $-8x - 8$
$\quad = -8(x + 1)$

(13) $6x^2 - 35x + 36$
$\quad = (2x - 9)(3x - 4)$

(14) $-16x^2 + 4x + 2$
$\quad = -2(8x^2 - 2x - 1)$
$\quad = -2(4x + 1)(2x - 1)$

(15) $-3x^2 + 29x - 40$
$\quad = -(3x^2 - 29x + 40)$
$\quad = -(3x - 5)(x - 8)$

(16) $-6x^2 + 8x - 2$
$\quad = -2(3x^2 - 4x + 1)$
$\quad = -2(x - 1)(3x - 1)$

(17) $-9x^2 - 9x + 54$
$\quad = -9(x^2 + x - 6)$
$\quad = -9(x - 2)(x + 3)$

(18) $-12x^2 + 34x - 24$
$\quad = -2(6x^2 - 17x + 12)$
$\quad = -2(2x - 3)(3x - 4)$

(19) $16x^2 + 52x + 42$
$\quad = 2(8x^2 + 26x + 21)$
$\quad = 2(4x + 7)(2x + 3)$

(20) $-30x + 70$
$\quad = -10(3x - 7)$

(21) $12x^2 - 5x - 72$
$\quad = (3x - 8)(4x + 9)$

(22) $-4x^2 - 20x + 56$
$\quad = -4(x^2 + 5x - 14)$
$\quad = -4(x + 7)(x - 2)$

(23) $-x^2 - 3x$
$\quad = -x(x + 3)$

(24) $3x^2 + 13x - 56$
$\quad = (x + 7)(3x - 8)$

(25) $-2x^2 + 5x + 7$
$\quad = -(2x^2 - 5x - 7)$
$\quad = -(x + 1)(2x - 7)$