tip: $ax^2 + bx + c$

$= a(x^2 + \frac{b}{a}x) + c$

$= a\left((x + \frac{b}{2a})^2 - \left(\frac{b}{2a}\right)^2\right) + c$

$= a(x + p)^2 + q$

(1) $-3x^2 + 24x - 47$

(2) $4x^2 - 32x + 65$

(3) $-2x^2 + 16x - 35$

(4) $x^2 + 16x + 59$

(5) $-5x^2 - 30x - 44$

(6) $-x^2 + 6x - 14$

(7) $2x^2 - 24x + 70$

(8) $-x^2 - 6x - 8$

(9) $x^2 + 14x + 44$

(10) $3x^2 - 54x + 239$

(11) $-4x^2 + 72x - 329$

(12) $x^2 - 20x + 96$

(13) $3x^2 + 54x + 245$

(14) $-2x^2 - 8x - 12$

(15) $2x^2 + 32x + 130$

(16) $3x^2 - 6x - 1$

(17) $2x^2 - 24x + 74$

(18) $-3x^2 - 12x - 13$

(19) $4x^2 + 64x + 260$

(20) $-5x^2 - 50x - 127$

(21) $-5x^2 - 60x - 181$

(22) $-4x^2 + 16x - 21$

(23) $3x^2 - 42x + 144$

(24) $-4x^2 - 24x - 35$

(25) $2x^2 + 28x + 101$