

tip:  $P(ax + b)(cx + d)$

$$= P\{acx^2 + (ad + bc)x + bd\}$$

$$= Pacx^2 + P(ad + bc)x + Pbd$$

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

$$= 2x^2 - 11x + 5$$

(2)  $(5x - 9)^2$

$$= 25x^2 - 90x + 81$$

(3)  $(5x - 8)(3x - 5)$

$$= 15x^2 - 49x + 40$$

(4)  $8(x - 9)$

$$= 8x - 72$$

(5)  $-10x(x - 1)$

$$= -10x^2 + 10x$$

(6)  $-(3x + 2)(x + 7)$

$$= -(3x^2 + 23x + 14)$$

$$= -3x^2 - 23x - 14$$

(7)  $30(x + 1)$

$$= 30x + 30$$

(8)  $-(3x - 4)(x + 2)$

$$= -(3x^2 + 2x - 8)$$

$$= -3x^2 - 2x + 8$$

(9)  $8(x + 2)(x + 3)$

$$= 8(x^2 + 5x + 6)$$

$$= 8x^2 + 40x + 48$$

(10)  $(3x + 5)(x + 2)$

$$= 3x^2 + 11x + 10$$

(11)  $-(3x - 1)(4x - 3)$

$$= -(12x^2 - 13x + 3)$$

$$= -12x^2 + 13x - 3$$

(12)  $(x + 5)^2$

$$= x^2 + 10x + 25$$

(13)  $(x + 1)(4x + 9)$

$$= 4x^2 + 13x + 9$$

(14)  $8(2x - 5)(x + 1)$

$$= 8(2x^2 - 3x - 5)$$

$$= 16x^2 - 24x - 40$$

(15)  $(x + 5)(3x - 7)$

$$= 3x^2 + 8x - 35$$

(16)  $-(4x + 3)(3x - 2)$

$$= -(12x^2 + x - 6)$$

$$= -12x^2 - x + 6$$

(17)  $-2(x - 4)(2x + 3)$

$$= -2(2x^2 - 5x - 12)$$

$$= -4x^2 + 10x + 24$$

(18)  $-(2x + 5)(5x + 7)$

$$= -(10x^2 + 39x + 35)$$

$$= -10x^2 - 39x - 35$$

(19)  $-12(x + 1)(x - 1)$

$$= -12x^2 + 12$$

(20)  $2(2x - 3)(3x - 2)$

$$= 2(6x^2 - 13x + 6)$$

$$= 12x^2 - 26x + 12$$

(21)  $(3x + 1)(2x + 9)$

$$= 6x^2 + 29x + 9$$

(22)  $(4x + 3)(2x - 5)$

$$= 8x^2 - 14x - 15$$

(23)  $3(x + 2)(5x - 6)$

$$= 3(5x^2 + 4x - 12)$$

$$= 15x^2 + 12x - 36$$

(24)  $2(2x + 1)(4x + 3)$

$$= 2(8x^2 + 10x + 3)$$

$$= 16x^2 + 20x + 6$$

(25)  $4(x - 4)(x + 2)$

$$= 4(x^2 - 2x - 8)$$

$$= 4x^2 - 8x - 32$$