

tip: $P(ax + b)(cx + d) = Pacx^2 + P(ad + bc)x + Pbd$

$$(1) 6(x - 5)$$

$$= 6x - 30$$

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

$$= -x^2 - x + 42$$

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

$$= 6x^2 + 4x - 16$$

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

$$= -6x^2 + 11x + 10$$

$$(5) -(x - 8)(4x + 7)$$

$$= -4x^2 + 25x + 56$$

$$(6) -2(x - 6)(x + 1)$$

$$= -2x^2 + 10x + 12$$

$$(7) (4x + 7)(2x + 9)$$

$$= 8x^2 + 50x + 63$$

$$(8) -9(3x + 7)$$

$$= -27x - 63$$

$$(9) 4(x + 1)(5x - 7)$$

$$= 20x^2 - 8x - 28$$

$$(10) -2(x + 1)(x - 1)$$

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

$$(11) -2(2x + 3)(x - 4)$$

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

$$(12) 4(2x + 5)(x + 1)$$

$$= 8x^2 + 28x + 20$$

$$(13) -7(2x + 7)$$

$$= -14x - 49$$

$$(14) -(x - 1)(3x + 2)$$

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

$$(15) 6(x + 2)(x - 2)$$

$$= 6x^2 - 24$$

$$(16) 3(x - 3)(3x + 8)$$

$$= 9x^2 - 3x - 72$$

$$(17) -2(2x + 1)(3x - 7)$$

$$= -12x^2 + 22x + 14$$

$$(18) -2(4x - 3)(x - 1)$$

$$= -8x^2 + 14x - 6$$

$$(19) -4(3x + 4)(x - 1)$$

$$= -12x^2 - 4x + 16$$

$$(20) -27(x - 1)$$

$$= -27x + 27$$

$$(21) 4(5x - 2)(x - 1)$$

$$= 20x^2 - 28x + 8$$

$$(22) -6(x - 3)^2$$

$$= -6x^2 + 36x - 54$$

$$(23) (5x - 2)(5x + 8)$$

$$= 25x^2 + 30x - 16$$

$$(24) -2(x + 3)(x - 3)$$

$$= -2x^2 + 18$$

$$(25) -(4x + 5)(x - 1)$$

$$= -4x^2 - x + 5$$

$$(26) -2(x + 4)(x + 5)$$

$$= -2x^2 - 18x - 40$$

$$(27) -10(x + 2)(x + 1)$$

$$= -10x^2 - 30x - 20$$

$$(28) -(5x - 7)(3x - 7)$$

$$= -15x^2 + 56x - 49$$

$$(29) -6(x + 1)(x + 2)$$

$$= -6x^2 - 18x - 12$$

$$(30) -2(2x - 1)(x + 3)$$

$$= -4x^2 - 10x + 6$$

$$(31) 10(x - 2)(x + 2)$$

$$= 10x^2 - 40$$

$$(32) 4x(x + 2)$$

$$= 4x^2 + 8x$$

$$(33) -(4x - 1)(3x + 1)$$

$$= -12x^2 - x + 1$$

$$(34) -2(2x + 1)(5x - 4)$$

$$= -20x^2 + 6x + 8$$

$$(35) 2(2x - 3)(x - 3)$$

$$= 4x^2 - 18x + 18$$

$$(36) -(4x - 7)(x - 5)$$

$$= -4x^2 + 27x - 35$$

$$(37) -9(2x + 9)$$

$$= -18x - 81$$

$$(38) -(5x + 1)(x + 4)$$

$$= -5x^2 - 21x - 4$$

$$(39) (x - 9)(3x + 2)$$

$$= 3x^2 - 25x - 18$$

$$(40) (x + 8)(x - 1)$$

$$= x^2 + 7x - 8$$

$$(41) -(4x - 9)(x - 7)$$

$$= -4x^2 + 37x - 63$$

$$(42) -3(x - 3)(x - 2)$$

$$= -3x^2 + 15x - 18$$

$$(43) -(2x - 3)(4x + 7)$$

$$\begin{aligned}
&= -8x^2 - 2x + 21 \\
(44) \quad &4(x-5)(x+1) \\
&= 4x^2 - 16x - 20 \\
(45) \quad &-2(2x-1)^2 \\
&= -8x^2 + 8x - 2 \\
(46) \quad &2(x-3)(x-6) \\
&= 2x^2 - 18x + 36 \\
(47) \quad &(5x+4)(4x-1) \\
&= 20x^2 + 11x - 4 \\
(48) \quad &-2(2x+1)(3x-2) \\
&= -12x^2 + 2x + 4 \\
(49) \quad &-(2x+5)(4x-7) \\
&= -8x^2 - 6x + 35 \\
(50) \quad &(4x+3)(5x-9) \\
&= 20x^2 - 21x - 27 \\
(51) \quad &(x+9)(3x-8) \\
&= 3x^2 + 19x - 72 \\
(52) \quad &-(x-6)(4x+7) \\
&= -4x^2 + 17x + 42 \\
(53) \quad &-2(3x+8)(x+5) \\
&= -6x^2 - 46x - 80 \\
(54) \quad &2(3x-1)(x+3) \\
&= 6x^2 + 16x - 6 \\
(55) \quad &2(x+7)(2x-1) \\
&= 4x^2 + 26x - 14 \\
(56) \quad &(5x+1)(x+9) \\
&= 5x^2 + 46x + 9 \\
(57) \quad &3(x+2)(3x+4) \\
&= 9x^2 + 30x + 24 \\
(58) \quad &-(3x-2)(4x+7) \\
&= -12x^2 - 13x + 14 \\
(59) \quad &3(x-4) \\
&= 3x - 12 \\
(60) \quad &4(x-1)(2x+9) \\
&= 8x^2 + 28x - 36 \\
(61) \quad &-3(4x-7)(x-3) \\
&= -12x^2 + 57x - 63 \\
(62) \quad &4(x-1)(x-4) \\
&= 4x^2 - 20x + 16 \\
(63) \quad &-(3x+5)(3x-4) \\
&= -9x^2 - 3x + 20 \\
(64) \quad &-3(5x-7)(x-2) \\
&= -15x^2 + 51x - 42 \\
(65) \quad &-(x-5)(2x-3) \\
&= -2x^2 + 13x - 15 \\
(66) \quad &6(x+2)(x+3) \\
&= 6x^2 + 30x + 36 \\
(67) \quad &-(2x-7)(4x-5) \\
&= -8x^2 + 38x - 35 \\
(68) \quad &-(2x+3)(2x-3) \\
&= -4x^2 + 9 \\
(69) \quad &-2(2x+1)(3x+2) \\
&= -12x^2 - 14x - 4 \\
(70) \quad &3(x-1)(x-6) \\
&= 3x^2 - 21x + 18 \\
(71) \quad &(4x-3)(3x+4) \\
&= 12x^2 + 7x - 12 \\
(72) \quad &(3x-8)(x+4) \\
&= 3x^2 + 4x - 32 \\
(73) \quad &2(x+9)(x-3) \\
&= 2x^2 + 12x - 54 \\
(74) \quad &-(4x-1)(3x-5) \\
&= -12x^2 + 23x - 5 \\
(75) \quad &-3(3x+4)(x-2) \\
&= -9x^2 + 6x + 24 \\
(76) \quad &3(x+2)(x+9) \\
&= 3x^2 + 33x + 54 \\
(77) \quad &4(x+3)(x-3) \\
&= 4x^2 - 36 \\
(78) \quad &-2(4x+7) \\
&= -8x - 14 \\
(79) \quad &-3(x+8) \\
&= -3x - 24 \\
(80) \quad &5(5x+6)(x+2) \\
&= 25x^2 + 80x + 60 \\
(81) \quad &3(x-3)(5x+4) \\
&= 15x^2 - 33x - 36 \\
(82) \quad &2(3x+8) \\
&= 6x + 16 \\
(83) \quad &2(2x+3)(x+9) \\
&= 4x^2 + 42x + 54 \\
(84) \quad &(5x-6)(x+10) \\
&= 5x^2 + 44x - 60 \\
(85) \quad &7(2x-5) \\
&= 14x - 35 \\
(86) \quad &(x-7)(3x-2)
\end{aligned}$$

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

(87) $(x - 10)(2x + 1)$

$$= 2x^2 - 19x - 10$$

(88) $-(x + 3)(5x + 3)$

$$= -5x^2 - 18x - 9$$

(89) $-8(x - 4)(x + 1)$

$$= -8x^2 + 24x + 32$$

(90) $(x + 9)(2x - 3)$

$$= 2x^2 + 15x - 27$$

(91) $-(2x - 5)(x + 10)$

$$= -2x^2 - 15x + 50$$

(92) $-(x + 1)(5x - 4)$

$$= -5x^2 - x + 4$$

(93) $2(x - 2)(x - 4)$

$$= 2x^2 - 12x + 16$$

(94) $(5x + 3)(x - 1)$

$$= 5x^2 - 2x - 3$$

(95) $4(x - 2)(2x + 5)$

$$= 8x^2 + 4x - 40$$

(96) $8(5x - 6)$

$$= 40x - 48$$

(97) $(4x + 7)(5x + 7)$

$$= 20x^2 + 63x + 49$$

(98) $-(2x - 7)(2x + 1)$

$$= -4x^2 + 12x + 7$$

(99) $-3(x + 2)(x + 5)$

$$= -3x^2 - 21x - 30$$

(100) $(5x - 1)(x + 1)$

$$= 5x^2 + 4x - 1$$