

$$\text{tip: } (ax + b)(a^2x^2 - abx + b^2) \\ = a^3x^3 + b^3$$

$$(1) (4x - 1)(16x^2 + 4x + 1) \\ = 64x^3 - 1$$

$$(2) (4x + 7)(16x^2 - 28x + 49) \\ = 64x^3 + 343$$

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

$$(4) (5x - 9)(25x^2 + 45x + 81) \\ = 125x^3 - 729$$

$$(5) (5x + 7)(25x^2 - 35x + 49) \\ = 125x^3 + 343$$

$$(6) (x - 1)(x^2 + x + 1) \\ = x^3 - 1$$

$$(7) (x + 2)(x^2 - 2x + 4) \\ = x^3 + 8$$

$$(8) (2x + 9)(4x^2 - 18x + 81) \\ = 8x^3 + 729$$

$$(9) (3x - 8)(9x^2 + 24x + 64) \\ = 27x^3 - 512$$

$$(10) (x + 5)(x^2 - 5x + 25) \\ = x^3 + 125$$

$$(11) (4x + 1)(16x^2 - 4x + 1) \\ = 64x^3 + 1$$

$$(12) (x + 2)(x^2 - 2x + 4) \\ = x^3 + 8$$

$$(13) (2x + 9)(4x^2 - 18x + 81) \\ = 8x^3 + 729$$

$$(14) (x - 3)(x^2 + 3x + 9) \\ = x^3 - 27$$

$$(15) (x - 3)(x^2 + 3x + 9) \\ = x^3 - 27$$

$$(16) (2x + 7)(4x^2 - 14x + 49) \\ = 8x^3 + 343$$

$$(17) (x + 9)(x^2 - 9x + 81) \\ = x^3 + 729$$

$$(18) (3x - 8)(9x^2 + 24x + 64) \\ = 27x^3 - 512$$

$$(19) (3x - 4)(9x^2 + 12x + 16) \\ = 27x^3 - 64$$

$$(20) (2x - 7)(4x^2 + 14x + 49) \\ = 8x^3 - 343$$

$$(21) (4x - 9)(16x^2 + 36x + 81)$$

$$= 64x^3 - 729$$

$$(22) (x + 3)(x^2 - 3x + 9) \\ = x^3 + 27$$

$$(23) (3x + 2)(9x^2 - 6x + 4) \\ = 27x^3 + 8$$

$$(24) (2x - 1)(4x^2 + 2x + 1) \\ = 8x^3 - 1$$

$$(25) (x - 6)(x^2 + 6x + 36) \\ = x^3 - 216$$

$$(26) (3x - 7)(9x^2 + 21x + 49) \\ = 27x^3 - 343$$

$$(27) (2x + 3)(4x^2 - 6x + 9) \\ = 8x^3 + 27$$

$$(28) (4x - 3)(16x^2 + 12x + 9) \\ = 64x^3 - 27$$

$$(29) (5x + 3)(25x^2 - 15x + 9) \\ = 125x^3 + 27$$

$$(30) (3x - 4)(9x^2 + 12x + 16) \\ = 27x^3 - 64$$

$$(31) (2x - 1)(4x^2 + 2x + 1) \\ = 8x^3 - 1$$

$$(32) (2x - 5)(4x^2 + 10x + 25) \\ = 8x^3 - 125$$

$$(33) (x + 3)(x^2 - 3x + 9) \\ = x^3 + 27$$

$$(34) (2x + 3)(4x^2 - 6x + 9) \\ = 8x^3 + 27$$

$$(35) (x - 1)(x^2 + x + 1) \\ = x^3 - 1$$

$$(36) (x - 8)(x^2 + 8x + 64) \\ = x^3 - 512$$

$$(37) (2x + 5)(4x^2 - 10x + 25) \\ = 8x^3 + 125$$

$$(38) (5x + 1)(25x^2 - 5x + 1) \\ = 125x^3 + 1$$

$$(39) (x + 1)(x^2 - x + 1) \\ = x^3 + 1$$

$$(40) (x + 6)(x^2 - 6x + 36) \\ = x^3 + 216$$

$$(41) (3x + 7)(9x^2 - 21x + 49) \\ = 27x^3 + 343$$

$$(42) (4x + 7)(16x^2 - 28x + 49) \\ = 64x^3 + 343$$

- (43)  $(x + 5)(x^2 - 5x + 25)$   
 $= x^3 + 125$
- (44)  $(4x + 9)(16x^2 - 36x + 81)$   
 $= 64x^3 + 729$
- (45)  $(5x - 7)(25x^2 + 35x + 49)$   
 $= 125x^3 - 343$
- (46)  $(x + 1)(x^2 - x + 1)$   
 $= x^3 + 1$
- (47)  $(3x - 1)(9x^2 + 3x + 1)$   
 $= 27x^3 - 1$
- (48)  $(2x + 1)(4x^2 - 2x + 1)$   
 $= 8x^3 + 1$
- (49)  $(x + 1)(x^2 - x + 1)$   
 $= x^3 + 1$
- (50)  $(2x - 3)(4x^2 + 6x + 9)$   
 $= 8x^3 - 27$