

tip1: $(ax + bi)(cx + di)$

$$= acx^2 + iadx + ibcx - bd$$

tip2: $i^2 = -1$

$$(1) (2x - 7i)(4x - 7i) \\ = 8x^2 - 42ix - 49$$

$$(2) (x + 2i)(x + 9i) \\ = x^2 + 11ix - 18$$

$$(3) (3x - 10i)(4x - i) \\ = 12x^2 - 43ix - 10$$

$$(4) -(x + 4i)^2 \\ = -(x^2 + 8ix - 16) \\ = -x^2 - 8ix + 16$$

$$(5) (x - 7i)(4x - 5i) \\ = 4x^2 - 33ix - 35$$

$$(6) (x - 2i)(x + i) \\ = x^2 - ix + 2$$

$$(7) -(x - i)(2x - 3i) \\ = -(2x^2 - 5ix - 3) \\ = -2x^2 + 5ix + 3$$

$$(8) (3x - 8i)(5x - 3i) \\ = 15x^2 - 49ix - 24$$

$$(9) (x + i)(x + 3i) \\ = x^2 + 4ix - 3$$

$$(10) -2(x - 3i)(5x - 6i) \\ = -2(5x^2 - 21ix - 18) \\ = -10x^2 + 42ix + 36$$

$$(11) -(x + 8i)(2x + 7i) \\ = -(2x^2 + 23ix - 56) \\ = -2x^2 - 23ix + 56$$

$$(12) (x + 2i)(4x - i) \\ = 4x^2 + 7ix + 2$$

$$(13) -(2x - 9i)(5x + 8i) \\ = -(10x^2 - 29ix + 72) \\ = -10x^2 + 29ix - 72$$

$$(14) (3x - 4i)(3x + i) \\ = 9x^2 - 9ix + 4$$

$$(15) -(3x + 7i)(3x + 8i) \\ = -(9x^2 + 45ix - 56) \\ = -9x^2 - 45ix + 56$$

$$(16) (4x - 5i)(4x - i) \\ = 16x^2 - 24ix - 5$$

$$(17) (x - 2i)(4x + 7i) \\ = 4x^2 - ix + 14$$

$$(18) (x - 4i)(4x - 5i) \\ = 4x^2 - 21ix - 20$$

$$(19) (3x - 8i)(4x - 5i) \\ = 12x^2 - 47ix - 40$$

$$(20) -(x - 9i)(4x + i) \\ = -(4x^2 - 35ix + 9) \\ = -4x^2 + 35ix - 9$$