

1 **解答** (1) $x^2 + 4x + 4$ (2) $x^2 - 2x + 1$ (3) $x^2 - 4$ (4) $a^2 - 9$

(1) $(x+2)^2 = x^2 + 2 \times 2 \times x + 2^2$

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

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

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

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

$$= x^2 - 4$$

(4) $(a-3)(a+3) = a^2 - 3^2$

$$= a^2 - 9$$

2 **解答** (1) $x^2 + 16x + 64$ (2) $x^2 - 18x + 81$ (3) $x^2 - 36$ (4) $y^2 + 10y + 25$

(5) $a^2 - 8a + 16$ (6) $t^2 - 1$

(1) $(x+8)^2 = x^2 + 2 \times 8 \times x + 8^2$

$$= x^2 + 16x + 64$$

(2) $(x-9)^2 = x^2 - 2 \times 9 \times x + 9^2$

$$= x^2 - 18x + 81$$

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

$$= x^2 - 36$$

(4) $(y+5)^2 = y^2 + 2 \times 5 \times y + 5^2$

$$= y^2 + 10y + 25$$

(5) $(a-4)^2 = a^2 - 2 \times 4 \times a + 4^2$

$$= a^2 - 8a + 16$$

(6) $(t+1)(t-1) = t^2 - 1^2$

$$= t^2 - 1$$

3 **解答** (1) $x^2 + 16x + 64$ (2) $a^2 - 12a + 36$ (3) $x^2 + x + \frac{1}{4}$ (4) $25 - x^2$

(5) $1 - p^2$

(1) $(x+8)^2 = x^2 + 2 \times 8 \times x + 8^2$

$$= x^2 + 16x + 64$$

(2) $(a-6)^2 = a^2 - 2 \times 6 \times a + 6^2$
 $= a^2 - 12a + 36$

(3) $\left(x + \frac{1}{2}\right)^2 = x^2 + 2 \times \frac{1}{2} \times x + \left(\frac{1}{2}\right)^2$
 $= x^2 + x + \frac{1}{4}$

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

$$= 25 - x^2$$

(5) $(-p+1)(1+p) = (1-p)(1+p)$

$$= 1^2 - p^2$$

$$= 1 - p^2$$