

- 1 **解答** (1)  $64x^2 - 16x + 1$  (2)  $9x^2 + 30x + 25$  (3)  $16a^2 + 56a + 49$   
 (4)  $4m^2 - 36m + 81$  (5)  $25p^2 - 80p + 64$  (6)  $4x^2 + 12xy + 9y^2$   
 (7)  $a^2 - 18ab + 81b^2$  (8)  $49x^2 - 28xy + 4y^2$  (9)  $16x^2 + 40xy + 25y^2$   
 (10)  $x^2 + xy + \frac{1}{4}y^2$  (11)  $a^2 - \frac{1}{3}ab + \frac{1}{36}b^2$  (12)  $9a^2 - 15ab + \frac{25}{4}b^2$
- (1)  $(8x-1)^2 = (8x)^2 - 2 \times 1 \times 8x + 1^2$   
 $= 64x^2 - 16x + 1$
- (2)  $(3x+5)^2 = (3x)^2 + 2 \times 5 \times 3x + 5^2$   
 $= 9x^2 + 30x + 25$
- (3)  $(4a+7)^2 = (4a)^2 + 2 \times 7 \times 4a + 7^2$   
 $= 16a^2 + 56a + 49$
- (4)  $(2m-9)^2 = (2m)^2 - 2 \times 9 \times 2m + 9^2$   
 $= 4m^2 - 36m + 81$
- (5)  $(-5p+8)^2 = (-5p)^2 + 2 \times 8 \times (-5p) + 8^2$   
 $= 25p^2 - 80p + 64$
- (6)  $(2x+3y)^2 = (2x)^2 + 2 \times 3y \times 2x + (3y)^2$   
 $= 4x^2 + 12xy + 9y^2$
- (7)  $(a-9b)^2 = a^2 - 2 \times 9b \times a + (9b)^2$   
 $= a^2 - 18ab + 81b^2$
- (8)  $(7x-2y)^2 = (7x)^2 - 2 \times 2y \times 7x + (2y)^2$   
 $= 49x^2 - 28xy + 4y^2$
- (9)  $(-4x-5y)^2 = (-4x)^2 - 2 \times 5y \times (-4x) + (5y)^2$   
 $= 16x^2 + 40xy + 25y^2$
- (10)  $\left(x + \frac{1}{2}y\right)^2 = x^2 + 2 \times \left(\frac{1}{2}y\right) \times x + \left(\frac{1}{2}y\right)^2$   
 $= x^2 + xy + \frac{1}{4}y^2$
- (11)  $\left(a - \frac{1}{6}b\right)^2 = a^2 - 2 \times \frac{1}{6}b \times a + \left(\frac{1}{6}b\right)^2$

- $= a^2 - \frac{1}{3}ab + \frac{1}{36}b^2$
- (12)  $\left(3a - \frac{5}{2}b\right)^2 = (3a)^2 - 2 \times \frac{5}{2}b \times 3a + \left(\frac{5}{2}b\right)^2$   
 $= 9a^2 - 15ab + \frac{25}{4}b^2$
- 2 **解答** (1)  $x^2 - 4$  (2)  $a^2 - 81$  (3)  $x^2 - 36$  (4)  $x^2 - 144$  (5)  $a^2 - 225$   
 (6)  $a^2 - 100$  (7)  $-m^2 + 49$  (8)  $x^2 - \frac{4}{9}$  (9)  $x^2 - \frac{1}{16}$

- (1)  $(x+2)(x-2) = x^2 - 2^2 = x^2 - 4$
- (2)  $(a+9)(a-9) = a^2 - 9^2 = a^2 - 81$
- (3)  $(x-6)(x+6) = x^2 - 6^2 = x^2 - 36$
- (4)  $(x+12)(x-12) = x^2 - 12^2 = x^2 - 144$
- (5)  $(a-15)(a+15) = a^2 - 15^2 = a^2 - 225$
- (6)  $(a+10)(-10+a) = (a+10)(a-10) = a^2 - 10^2$   
 $= a^2 - 100$
- (7)  $(7-m)(m+7) = -(m-7)(m+7)$   
 $= -(m^2 - 7^2)$   
 $= -(m^2 - 49)$   
 $= -m^2 + 49$
- (8)  $\left(x + \frac{2}{3}\right)\left(x - \frac{2}{3}\right) = x^2 - \left(\frac{2}{3}\right)^2$   
 $= x^2 - \frac{4}{9}$
- (9)  $\left(-\frac{1}{4} + x\right)\left(\frac{1}{4} + x\right) = \left(x - \frac{1}{4}\right)\left(x + \frac{1}{4}\right)$   
 $= x^2 - \left(\frac{1}{4}\right)^2$   
 $= x^2 - \frac{1}{16}$