

$$x = -y \neq 0$$

$$x^3 - 3x = -x$$

$$x = \sqrt{2} \text{ or } -\sqrt{2}$$

$$y = -\sqrt{2} \text{ or } \sqrt{2}$$

$$x \neq -y$$

$$(1) + (2)$$

$$x^3 + y^3 = 4(x + y)$$

$$x^2 - xy + y^2 = 4 \quad \dots\dots(3)$$

$$(1) - (2)$$

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

$$x^2 + xy + y^2 = 2 \quad \dots\dots(4)$$

$$(3) + (4)$$

$$x^2 + y^2 = 3 \quad \dots\dots(5)$$

$$(4) - (3)$$

$$xy = -1$$

$$y = -\frac{1}{x} \text{ 代入 (5)}$$

$$x^2 + \frac{1}{x^2} = 3$$

$$x^2 = \frac{3 \pm \sqrt{5}}{2}$$

$$x = \frac{1 + \sqrt{5}}{2} \text{ or } \frac{1 - \sqrt{5}}{2} \text{ or } \frac{-1 + \sqrt{5}}{2} \text{ or } \frac{-1 - \sqrt{5}}{2}$$

$$y = \frac{1 - \sqrt{5}}{2} \text{ or } \frac{1 + \sqrt{5}}{2} \text{ or } \frac{-1 - \sqrt{5}}{2} \text{ or } \frac{-1 + \sqrt{5}}{2}$$