

③

$$(i) \quad x^2 + 10x + 21 = 0$$

$$(x+7)(x+3) = 0$$

$$x+7=0 \quad x+3=0$$

$$x=-7 \quad x=-3$$

$$(ii) \quad x^2 - 3x + 2 = 0$$

$$(x-2)(x-1) = 0$$

$$x-2=0 \quad x-1=0$$

$$x=2 \quad x=1$$

$$(iii) \quad x^2 + 12x + 20 = 0$$

$$(x+10)(x+2) = 0$$

$$x+10=0 \quad x+2=0$$

$$x=-10 \quad x=-2$$

$$(iv) \quad x^2 - 64 = 0$$

$$x^2 - 8^2 = 0$$

$$(x-8)(x+8) = 0$$

$$x-8=0 \quad x+8=0$$

$$x=+8 \quad x=-8$$

$$(v) \quad 2x^2 + 9x + 10 = 0$$

$$\begin{array}{r} 2x^2 + 9x + 10 = 0 \\ 2x^2 + 5x + 4x + 10 = 0 \\ 2x^2 + 5x + 2(x+2) + 10 = 0 \\ 2x^2 + 5x + 2x + 4 + 2x + 4 + 10 = 0 \\ 2x^2 + 5x + 2x + 4 + 2x + 4 + 10 = 0 \end{array}$$

$$(2x+5)(x+2) = 0$$

$$2x+5=0 \quad x+2=0$$

$$2x=-5 \quad x=-2$$

$$x=-\frac{5}{2}$$