

Komplex numbers

$$x^2 + 2x + 1 = 0$$

$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \begin{cases} \frac{-2 \pm \sqrt{4 - 4}}{2} = -1 \\ \frac{-2 \pm \sqrt{4 - 4}}{2} = -1 \end{cases}$$

$$x^2 + 2x + 2 = 0$$

$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \begin{cases} \frac{-2 \pm \sqrt{4 - 8}}{2} = \\ \frac{-2 \pm \sqrt{4 - 8}}{2} = \end{cases}$$

$$x_1 = -1 + 0.5\sqrt{-4} = -1 + 0.5 \cdot \sqrt{4} \cdot i = -1 + i$$

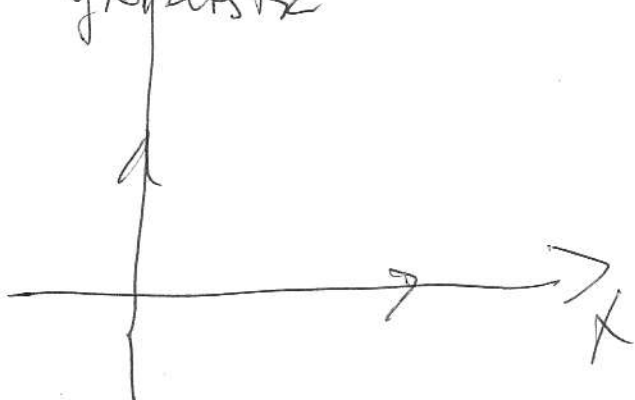
$$x_2 = -1 - 0.5\sqrt{-4} = -1 - 0.5 \cdot \sqrt{4} \cdot i = -1 - i$$

$$\sqrt{-1} = i$$

gleiches

Wegs /

imaginär
V. komplexen



$$i \cdot i = 1$$