

# Complex Numbers

Before:  $\sqrt{25} = 5$

$$-\sqrt{25} = -5$$

$$\sqrt{-25} \text{ not a real number}$$

$$x^2 = 25$$

$$x^2 = -25$$

$$x = 5 \text{ or } x = -5$$

not a real number

$$\sqrt{x^2} = \sqrt{-1}$$

$$x = -1$$

Complex number: "i" imaginary number

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

and

$$i^2 = -1$$