

1 example

$$z = x + iy \tag{1}$$

$$z = re^{i\phi}$$

$$z = r\cos(\phi) + r\sin(\phi) \tag{2}$$

$$\sqrt{z} = \sqrt{r}\cos(\phi/2) + \sqrt{r}\sin(\phi/2) \tag{3}$$

2 example

Thus for all real numbers x we have

$$x \leq |x| \quad \text{and} \quad x \geq -|x|$$

and so

$$x \leq |x| \quad \text{for all } x \text{ in } R.$$