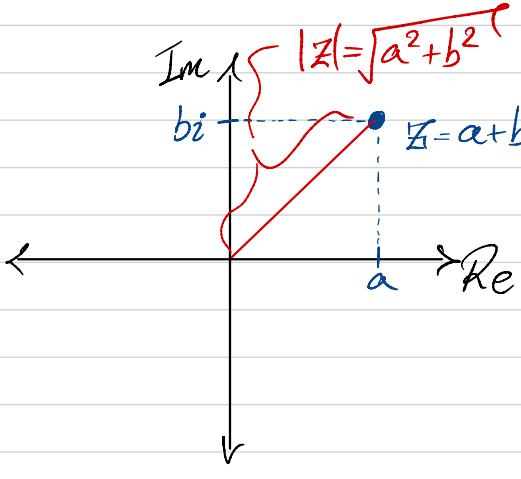
Math 102 - Lab 2: Modulus

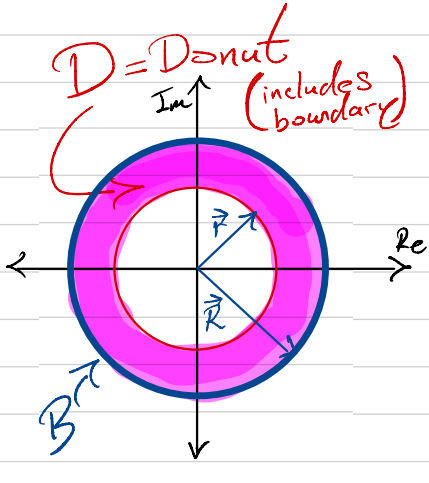


When $b=0$,
$z=a+bi=a+0i=a$.
Then $|z|=\sqrt{a^2+0^2}=\sqrt{a^2}$
$=|a|$
absolute value

Example: Describe the region D in terms of complex numbers.

$\vec{r}$ and $\vec{R}$ are vectors in $\mathbb{R}^2$.

$\vec{r}$ has length a (≥ 0)
$\vec{R}$ has length b $(>a)$



$$D=\{z\in\mathbb{C} \mid a\leq|z|\leq b\}$$

$$B=\{z\in\mathbb{C} \mid |z|=b\}$$