

$$e^2 \neq 0$$

$$e^{x+yi} \neq 0$$

$$e^x (\cos y + i \sin y) \neq 0$$

$$e^x \neq 0 \wedge \cos y + i \sin y \neq 0$$

↑  
both arguments of the above  $\cos y + i \sin y$  are never 0.