

TE du 01/12/2023 :

• Liste du 20/09/2023 ✓  
(limites & continuité) 15

• 2.8.1 à 2.8.4 } asymptotes  
2.8.8

• 2.9.7 à 2.9.12 dérivées

• 1.2.2 à 1.2.6 complexes

TE OS 19/12/2023

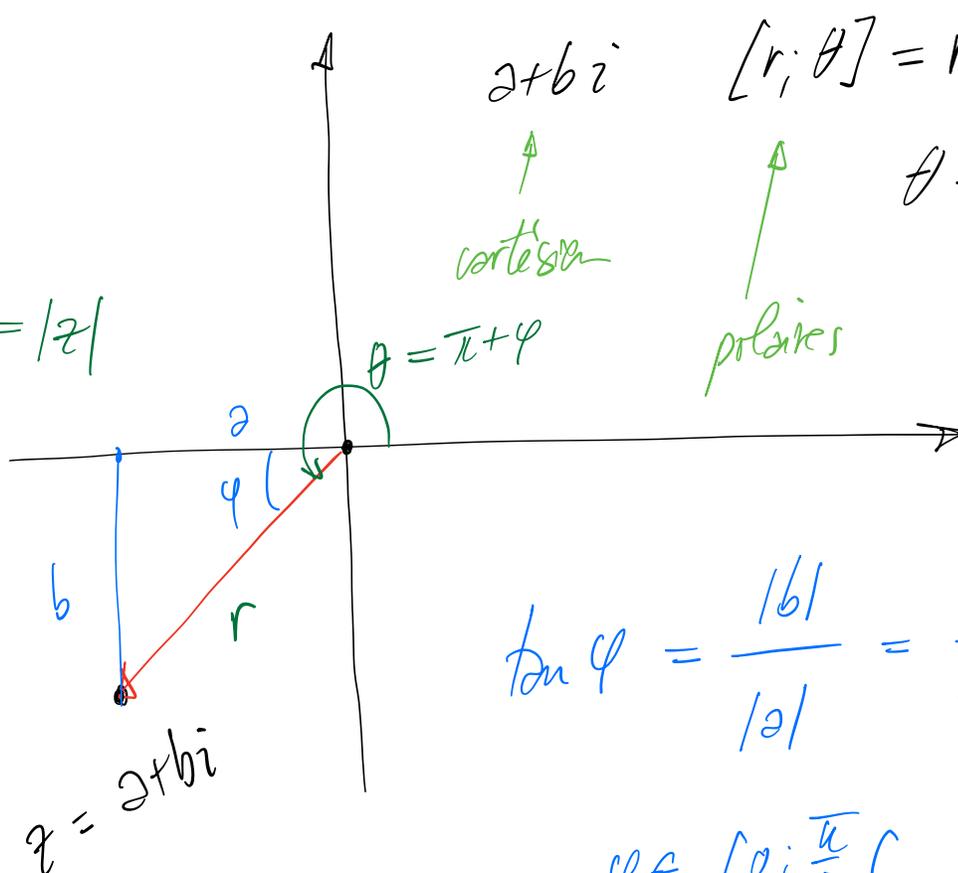
• Vigenère / Progressive / Autoclave

• pgdc / Euclide / Euclide étendu / Expo. mod.

$\mathbb{C}$

$$r^2 = a^2 + b^2$$

$$r = \sqrt{a^2 + b^2} = |z|$$



$a + bi$   
↑  
cartésien

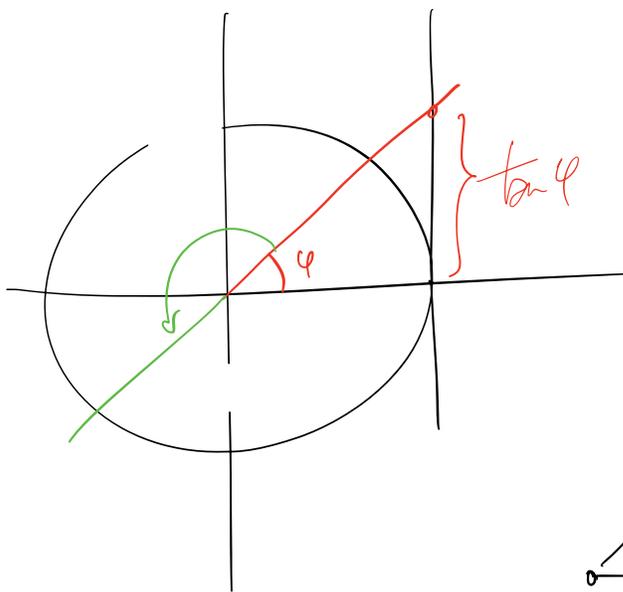
$$[r; \theta] = r(\cos\theta + i\sin\theta)$$

$$\theta \in [0; 2\pi[$$

↑  
polaires

$$\tan \varphi = \frac{|b|}{|a|} = \frac{\text{opp.}}{\text{adj.}}$$

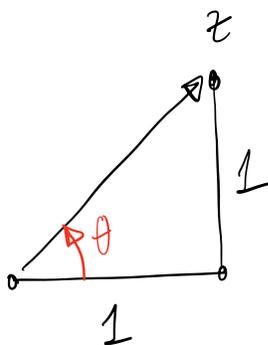
$$\varphi \in [0; \frac{\pi}{2}[$$



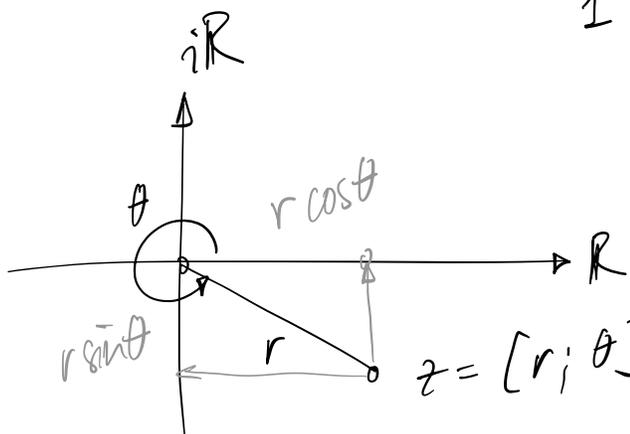
$$r = |z| = \sqrt{1^2 + 1^2} = \sqrt{1+1} = \sqrt{2}$$

$$z = 1 + i = 1 + 1i$$

$$z = [\sqrt{2}; \frac{\pi}{4}]$$



$$\theta = \arctan\left(\frac{1}{1}\right) = \frac{\pi}{4} (+k\pi)$$



$$= \overbrace{r \cos \theta}^a + i \overbrace{r \sin \theta}^b = a + bi$$

$$= r(\cos \theta + i \sin \theta)$$