FORMA ALGEBRICA IN C

M4026

$(a;b)$ numero complesso

$(a;0)$ numero reale · $(0;b)$ numero immaginario

PROVO A MOLTIPLICARE $\boxed{(0;1)\cdot(b;0)}=$

$$\begin{matrix} 0 & & 1 \\ | & \times & | \\ b & & 0 \end{matrix} = (0\cdot b - 1\cdot 0\ ;\ 0\cdot 0 + b\cdot 1) = (0;b)$$

$$(a;b) = (a;0)+(0;b) = (a;0)+(0;1)\cdot(b;0)$$

$$(a;0) + i\,(b;0)$$

$(a;0)$ → reale → a

$(b;0)$ → reale → b

$$a + i\,b$$

$(a;b) \rightarrow a+ib$

$(a;b)$ → forma complessa

$a+ib$ → forma algebrica

$(2;3) \rightarrow 2+3i$

$(7;5)\cdot(-3;2)+[(5;3)]$

$\downarrow$

$(7+5i)(-3+2i)+(5+3i)=$

$-21+14i-15i+10i^2+5+3i=$

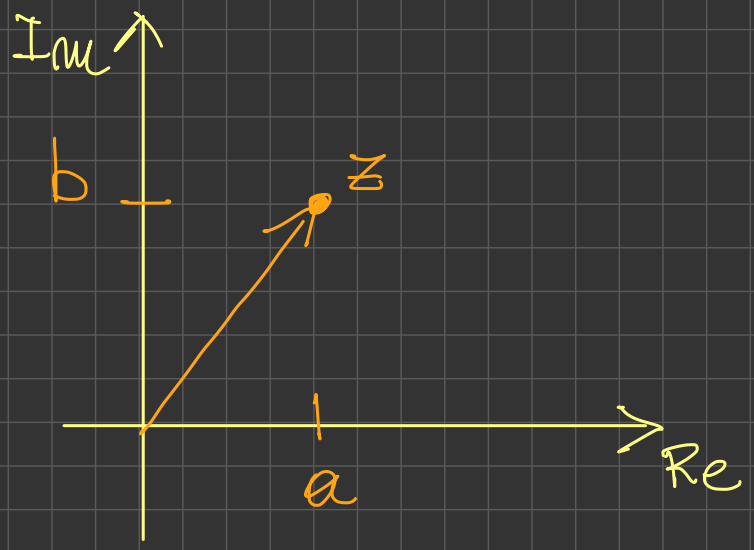
$-16+2i+10i^2$ ma $\rightarrow i^2=-1$

$-16+2i-10 \rightarrow -26+2i \rightarrow (-26;2)$

Si scrive $z=(a;b)=a+ib$ dove

$Re(z)=a$ $Im(z)=b$

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



$i^3 = i^2 \cdot i$

$i^7 = i^2 \cdot i^2 \cdot i^2 \cdot i$
$(-1)(-1)(-1)i$

Le potenze di i	
i^0	1
i^1	i
i^2	-1
i^3	$-i$
i^4	1
i^5	i
i^6	-1
i^7	$-i$
i^8	1
i^9	i
i^{10}	-1
i^{11}	$-i$
...	...

CALCOLA $(7i)^2 = -49$