

<b>Cartesian form</b>	$a + bi$
<b>Conjugate</b>	$z = a + bi \rightarrow \bar{z} = a - bi$
<b>Modulus</b>	$ z  = \sqrt{a^2 + b^2}$
<b>Argument</b>	$\alpha = \arctan\left(\frac{b}{a}\right)$
<b>Polar form</b>	$ z _\alpha$
<b>Trigonometric form</b>	$ z  \cdot (\cos \alpha + i \cdot \sin \alpha) =  z  \operatorname{cis} \alpha$
<b>Polar to Cartesian conversion</b>	$\left. \begin{array}{l} \operatorname{Re} = a =  z  \cos \alpha \\ \operatorname{Im} = b =  z  \sin \alpha \end{array} \right\} \rightarrow  z  \cdot (\cos \alpha + i \cdot \sin \alpha) = a + bi$
<b>Addition in cartesian form</b>	$(a + bi) + (c + di) = (a + c) + (b + d)i$
<b>Subtraction in cartesian form</b>	$(a + bi) - (c + di) = (a - c) + (b - d)i$
<b>Multiplication in cartesian form</b>	$(a + bi) \cdot (c + di) = (ac - bd) + (ad + bc)i$
<b>Division in cartesian form</b>	$\frac{a + bi}{c + di} = \frac{(a + bi) \cdot (c - di)}{(c + di) \cdot (c - di)} = \frac{(ac + bd) + (bc - ad)i}{c^2 + d^2}$
<b>Multiplication in polar form</b>	$ z _\alpha \cdot  w _\beta =  z \cdot w _{\alpha+\beta}$
<b>Division in polar form</b>	$\frac{ z _\alpha}{ w _\beta} = \left  \frac{z}{w} \right _{\alpha-\beta}$
<b>Power in polar form</b>	$( z _\alpha)^n =  z^n _{\alpha \cdot n}$
<b>n-th root in polar form</b>	$\sqrt[n]{ z _\alpha} = \left( \sqrt[n]{ z } \right)_{\frac{\alpha+k \cdot 360^\circ}{n}} \quad k = 0, 1, 2, \dots, n-1$