## Complex conjugate

Complex conjugation means reflecting the complex plane in the real line.
The notation for the complex conjugate of $z$ is either $\bar{z}$ or $z^{*}$. The complex conjugate has the same real part as $z$ and the same imaginary part but with the opposite sign. That is, if $z=a+i b$, then $z^{*}=a-i b$.

In polar complex form, the complex conjugate of $r e^{i \theta}$ is $r e^{-i \theta}$.

