

9 Conjugate of complex number and Division of Complex Numbers:

Conjugate of $c = a + ib$ is defined to be the complex number $\bar{c} = a - ib$.

Basic properties.

1. $\bar{\bar{c}} = c$
2. $\overline{c + d} = \bar{c} + \bar{d}$
3. $\overline{cd} = \bar{c}\bar{d}$
4. $\bar{c} = c$ if and only if c is a real number.
5. $c\bar{c} = a^2 + b^2$ is a nonnegative real number and $c\bar{c} = 0$ if and only if $c = 0$.

type	$z21 = 3 - 5i$	
type	$z22 = 2 + 9i$	
type	$z23 = 4 - 7i$	
type	$z24 = \text{conj}(z21)$	
type	$z25 = z21 + z22$	
type	$z26 = \text{conj}(z25)$	
type	$z27 = z21 * z22$	
type	$z28 = \text{conj}(z21) * \text{conj}(z22)$	
type	$z29 = \text{conj}(z27)$	
type	$z30 = \text{conj}(z28)$	