

the **conjugate** of $a + bi$ is denoted $\overline{a + bi} = a - bi$;
therefore $\overline{1 + 2i} = 1 - 2i$, and similarly $\overline{2 - 3i} = 2 + 3i$;

Notice: The product of conjugate complex numbers is a real number!

- **Division** (use rationalization technique)

Example 3: Divide.

a) $\frac{1}{i}$

b) $\frac{2}{1-i}$

c) $\frac{i}{2+3i}$

d) $\frac{2+3i}{2-3i}$

Example 4: Evaluate $\frac{-b + \sqrt{b^2 - 4ac}}{2a}$ for the given values of a , b , and c .

a) $a = 2, b = -2, c = 1$

b) $a = 3, b = 2, c = 4$