Math150  Lecture Notes  3.4

Complex Numbers

Definition: \( i = \sqrt{-1} \)

A complex number is an expression of the form: \( a + bi \), where \( a \) is the real part, and \( bi \) is the imaginary part.

Add, subtract, multiply and divide

\[
(5 + 2i) + (3 - 5i) =
\]

\[
(5 + 2i) - (3 - 5i) =
\]

\[
(5 + 2i)(3 - 5i) =
\]

\[
\frac{5 + 2i}{3 - 5i} =
\]

Solve: \( x^2 + 4x + 5 = 0 \)

Solve: \( z + 4 + \frac{12}{z} = 0 \)