

Section 10.7—Complex Numbers

Solve $x^2 + 1 = 0$

What is an IMAGINARY
NUMBER?

Example $\sqrt{-49}$

$\sqrt{-11}$

What is a COMPLEX
NUMBER?

How do I
ADD/SUBTRACT
complex numbers?

Example $(5 - 3i) + (4 - 5i)$

$(8 - 3i) - (-1 - 2i)$

How do I MULTIPLY
complex numbers?

Example $(4i)(-7i)$

$-7i(5 - 8i)$

Example $(5 - 2i)(4 + i)$

$(5 - 3i)^2$

How do I RATIONALIZE
an imaginary
denominator?

$\frac{6}{7i}$

$\frac{5}{6 + i}$

Powers of i

$i =$

$i^5 =$

$i^2 =$

$i^6 =$

$i^3 =$

$i^7 =$

$i^4 =$

$i^8 =$

Summary: