

Complex Numbers

$a + bi$

↑ ↑
a and b are real numbers

$a + bi$ and $a - bi$ are called **CONJUGATES**.

↙ ↘
opposite signs

Oct 28-10:02 AM

Ex.4 Add or Subtract

a. $(3 + 5i) + (-2 + 3i) = 1 + 8i$

b. $(-1 - 4i) - (3 + 2i) = -1 - 4i - 3 - 2i = -4 - 6i$

c. $(4 + i) + (-2 + 3i) - 5i = 2 + 9i$

d. $10 - (-4 - 2i) - 5 = 10 + 4 + 2i - 5 = 9 + 2i$

Oct 28-10:16 AM

Ex.5 Multiply and Simplify $i^2 = -1$

a. $2i(3 - 4i) = 6i - 8i^2 = 6i + 8 = 8 + 6i$

b. $-i(2 + 3i) = -2i - 3i^2 = 3 - 2i$

c. $(2 + 6i)(-3 + 2i) = -6 + 4i - 18i + 12i^2 = -18 - 14i$

d. $(5 + 2i)(5 - 2i) = 25 - 10i + 10i - 4i^2 = 29$

Oct 28-10:17 AM

Ex 6: Divide

a.

b.

Jul 28-10:36 AM

Ex.7 Divide and Simplify

a. $\frac{2 + i}{4 - 5i}$

b. $\frac{5 - 2i}{3 + 3i}$

Oct 28-10:19 AM