



Adding Complex Numbers

Go to page 1.2. The first two exercises have been answered for you. Record the solutions below and discuss with a partner how you think the *Calculator* application is adding the two complex numbers. Next, complete exercises 3–5 using page 1.2.

- $(3 + 4i) + (2 + 5i) =$ _____
- $(1 - 6i) + (3 - 2i) =$ _____
- $(2 + 5i) + (6 - 8i) =$ _____
- $(-2 + 3i) + (1 - 2i) =$ _____
- $(4 - 3i) + (-5 - 7i) =$ _____
- Explain how to add two complex numbers.

Subtracting Complex Numbers

Go to page 1.3. The first two questions have been answered for you. Record the solutions below and discuss with a partner how you think the two complex numbers are being subtracted. Next, complete exercises 3–5 using page 1.3.

- $(3 + 4i) - (2 + 5i) =$ _____
- $(1 - 6i) - (3 - 2i) =$ _____
- $(2 + 5i) - (6 - 8i) =$ _____
- $(-2 + 3i) - (1 - 2i) =$ _____
- $(4 - 3i) - (-5 - 7i) =$ _____
- Explain how to subtract two complex numbers.

Multiplying Complex Numbers

Go to page 2.1. The first two exercises have been answered for you. Record the solutions below and discuss with a partner how you think the complex numbers are being multiplied.

- $(3 + 4i)(2 + 5i) =$ _____
- $(1 - 6i)(3 - 2i) =$ _____
- Why is there no i^2 in the answers above?

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Now, complete exercises 4–6 using page 2.1.

- $(2 + 5i)(6 - 8i) = \underline{\hspace{2cm}}$
- $(4 - 3i)(-5 - 7i) = \underline{\hspace{2cm}}$
- Explain how to multiply two complex numbers.
- $(-2 + 3i)(1 - 2i) = \underline{\hspace{2cm}}$

Dividing Complex Numbers

Go to page 2.2. The first two exercises have been answered for you. Record the solutions below and discuss with a partner how you think two complex numbers are divided.

- $\frac{(2 + 4i)}{3i} = \underline{\hspace{2cm}}$
- $\frac{(1 - 2i)}{2i} = \underline{\hspace{2cm}}$
- Why is i not in the denominator of the answers above?

- What can you multiply the denominator by to eliminate the imaginary part?

Now, complete problems 5–7 on page 2.2.

- $\frac{(2 - 3i)}{4i} = \underline{\hspace{2cm}}$
- $\frac{(4 - 7i)}{-3i} = \underline{\hspace{2cm}}$
- $\frac{(8 + 5i)}{-2i} = \underline{\hspace{2cm}}$
- Explain how to divide two complex numbers: