

**ALGEBRA II**  
**Chapter 4 section 6**  
**Perform Operations with Complex Numbers**  
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**FOCUS:**

How do you perform operations on complex numbers?

**VOCAB:**

*Imaginary unit i:* \_\_\_\_\_

*Complex number:* \_\_\_\_\_

*Imaginary number:* \_\_\_\_\_

*Complex conjugates:* \_\_\_\_\_

*Complex plane:* \_\_\_\_\_

*Absolute value of a complex number:* \_\_\_\_\_

**WARM – UP:**

Simplify.

1.  $\frac{3}{4 - \sqrt{5}}$  \_\_\_\_\_

Solve the equation.

2.  $2(x + 7)^2 = 16$  \_\_\_\_\_

3.  $3x^2 + 8 = 23$  \_\_\_\_\_

4. Three times the square of a number is 15. What is the number?

**NOTES:**

Solve.

$$2x^2 + 18 = -72$$

$$5x^2 + 33 = 3$$

Write the expression as a complex number in standard form.

$$(12 - 11i) + (-8 + 3i)$$

$$(15 - 9i) - (24 - 9i)$$

$$35 - (13 + 4i) + i$$

$$-5i(8 - 9i)$$

$$(-8 + 2i)(4 - 7i)$$

$$i(9 - i)$$

Write the quotient in standard form.

$$\frac{3 + 4i}{5 - i}$$

$$\frac{5}{1 + i}$$

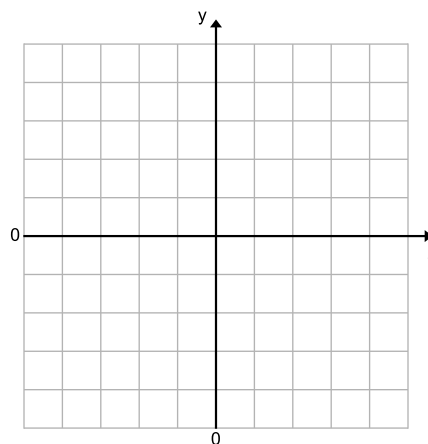
Plot the complex numbers in the same complex plane.

A.  $4 + 2i$

B.  $-1 + 3i$

C.  $-4i$

D.  $2 - 2i$



Find the absolute value of...

$$5 - 12i$$

$$17i$$

Let's see if you comprehended what we worked on in class...

Try \_\_\_\_\_ for homework