Math 119 – Chapter 12.3 (Graphical Representation of Complex Numbers)

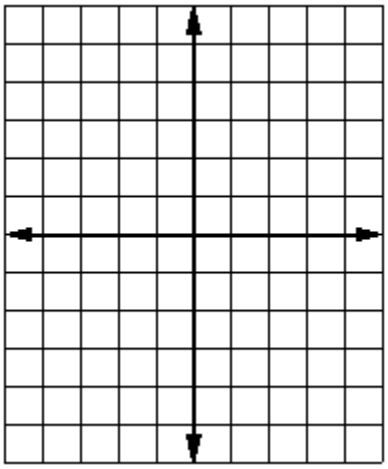
Because complex numbers have two parts the can be represented as a vector in the rectangular coordinate system. Doing this allows us to describe a complex number in another form than rectangular called polar form. With the polar form of complex numbers we can perform the two of the four operations, multiplying and dividing much more quickly. We can also raise complex numbers to powers and take roots of them. This section will just look at how you can graph complex numbers in the rectangular coordinate system.

The objective for this section includes

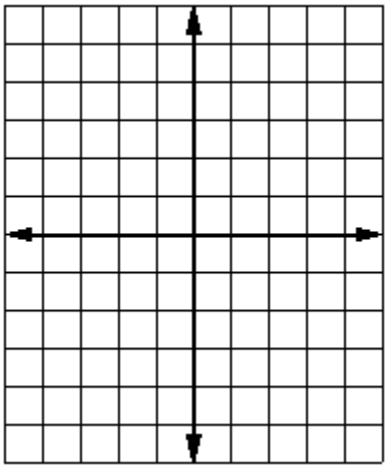
- Represent a complex number graphically in the complex plane
- Add complex numbers graphically

Graph each complex number as a vector in the complex plane:

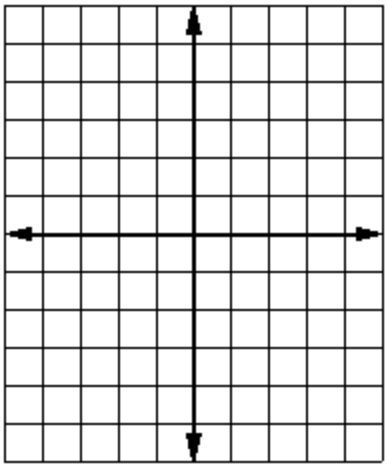
1. $(2+6j)$



3. $(4-j)$

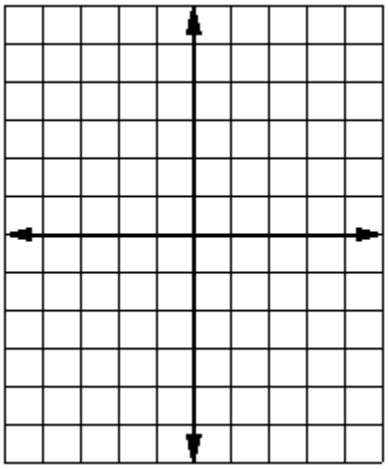


2. $(-2-5j)$

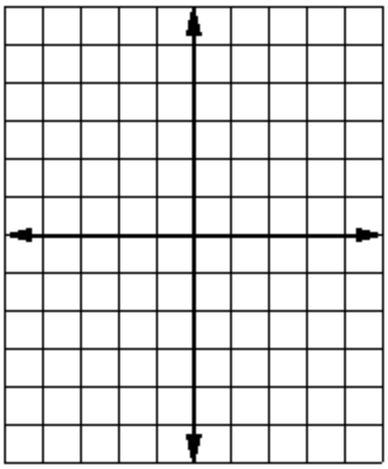


Add or subtract these complex numbers graphically

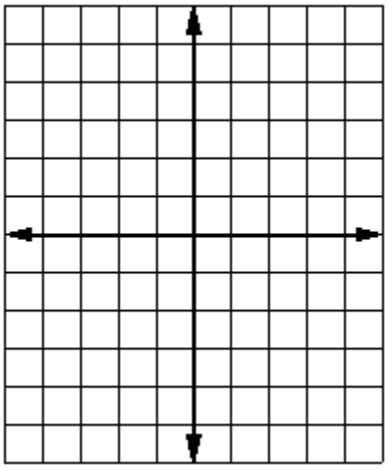
4. $(4-3j)+(-1-2j)$



5. $(-3+4j)+(-5-j)$



6. $(5-2j)-(-2-4j)$



7. Graph the complex number and its conjugate. Describe the relative positions.