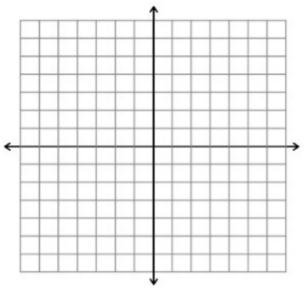
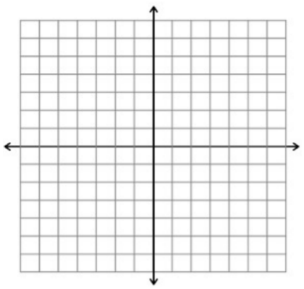
8.3, # 8,13: Graph the following complex numbers in the plane. Then, find their modulus and write them in polar form, using approximate angles if necessary.

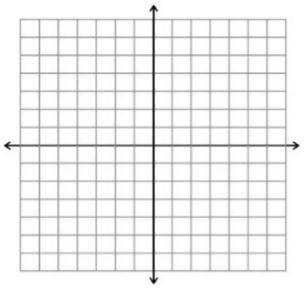
(a). $z = -4$



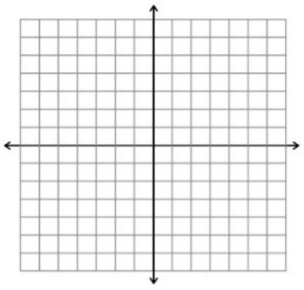
(b). $z = 3i$



(c). $-\frac{1}{3} - \frac{2}{3}i$



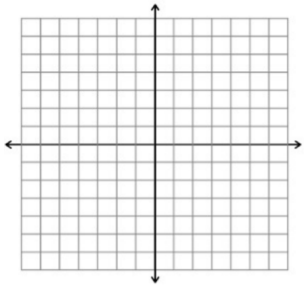
(d). $\frac{3}{8} + \frac{7}{8}i$.



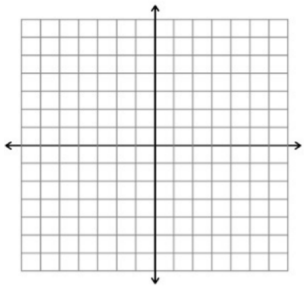
8.3, # 32: Given $z_1 = 27(\cos 67^\circ + i \sin 67^\circ)$ and $z_2 = 9(\cos 53^\circ + i \sin 53^\circ)$, find the product $z_1 z_2$ and quotient $\frac{z_1}{z_2}$ and write them in polar form.

8.3, # 18: Graph the following complex numbers in the plane. Then, find their modulus and write them in polar form, using approximate angles if necessary.

(a). $3\sqrt{2} - 3\sqrt{2}i$.



(b). $-\sqrt{2} + \sqrt{2}i$.



8.3, # 23: Convert $18\left(\cos\frac{5\pi}{3} + i \sin\frac{5\pi}{3}\right)$ to rectangular $(a + bi)$ form.

8.3, # 39: Given $z_1 = 2 - 2i$ and $z_2 = 3 + 3i$, find the product $z_1 z_2$ and quotient $\frac{z_1}{z_2}$ and write them in polar form.

8.3, # 50,52: Compute the following using DeMoivre's Theorem, expressing your final answers in rectangular form.

(a). $[4(\cos 33.75^\circ + i \sin 33.75^\circ)]^4$.

(b). $(4 + 4\sqrt{3}i)^3$.