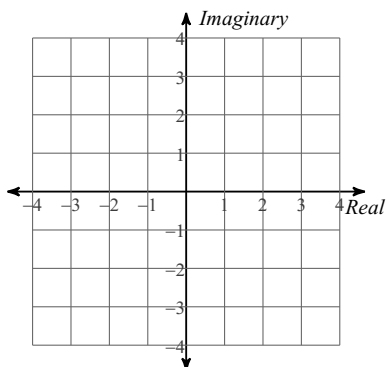


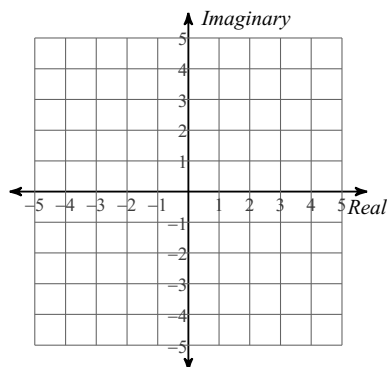
Converting btw complex and polar

Plot each point in the complex plane using rectangular coordinates.

1) $-3 + i$



2) $5 - 4i$



Find the absolute value of each complex number.

3) $-4 + 4i$

4) $\frac{\sqrt{31}}{2} + \frac{\sqrt{93}}{2}i$

Convert numbers in rectangular form to polar form and numbers in polar form to rectangular form.

5) $\sqrt{11} + i\sqrt{11}$

6) $\sqrt{33}\left(\cos \frac{\pi}{3} + i\sin \frac{\pi}{3}\right)$

7) $2i\sqrt{2}$

8) $2\sqrt{5}\left(\cos \frac{7\pi}{6} + i\sin \frac{7\pi}{6}\right)$

9) $2\left(\cos \frac{5\pi}{6} + i\sin \frac{5\pi}{6}\right)$

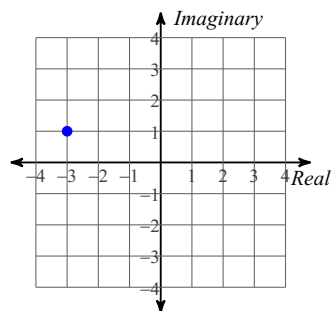
10) $2\sqrt{3} + 2i$

11) $4(\cos 180 + i\sin 180)$

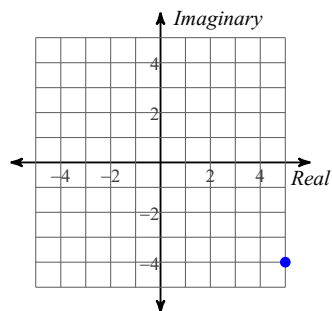
12) $\frac{5}{2} + \frac{5\sqrt{3}}{2}i$

Answers to Converting btw complex and polar

1)



2)



3) $4\sqrt{2}$

4) $\sqrt{31}$

5) $\sqrt{22}\left(\cos \frac{\pi}{4} + i\sin \frac{\pi}{4}\right)$

6) $\frac{\sqrt{33}}{2} + \frac{3\sqrt{11}}{2}i$

7) $2\sqrt{2}\left(\cos \frac{\pi}{2} + i\sin \frac{\pi}{2}\right)$

8) $-\sqrt{15} - i\sqrt{5}$

9) $-\sqrt{3} + i$

10) $4\left(\cos \frac{\pi}{6} + i\sin \frac{\pi}{6}\right)$

11) -4

12) $5(\cos 60 + i\sin 60)$