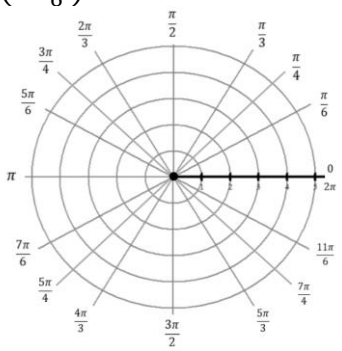
3.13 Trigonometric and Polar Coordinates

AP Precalculus Name: _____

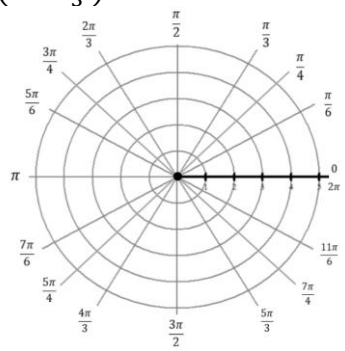
CA #2

Plot the following polar points.

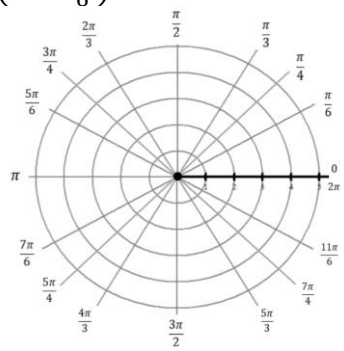
1. $\left(3, \frac{7\pi}{6}\right)$



2. $\left(-2, \frac{2\pi}{3}\right)$



3. $\left(4, -\frac{7\pi}{6}\right)$



Convert the polar coordinates to rectangular coordinates.

4. $\left(8, \frac{2\pi}{3}\right)$

5. $\left(-2, \frac{\pi}{4}\right)$

6. $\left(9, \frac{11\pi}{6}\right)$

Convert the rectangular coordinates to polar coordinates where $0 \leq \theta \leq 2\pi$.

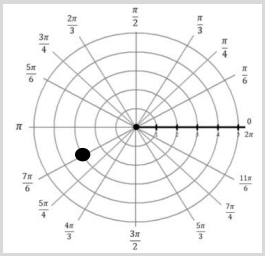
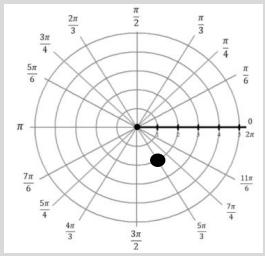
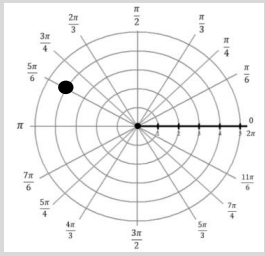
7. $(-3, 6)$

8. $(2, 7)$

9. $(-3, -5)$

Convert rectangular complex numbers to polar form.		
10. $1 - 4i$	11. $-6 + 4i$	12. $3 + 7i$
Convert polar complex numbers to rectangular form.		
13. $6\left[\cos\left(\frac{5\pi}{4}\right) + i\sin\left(\frac{5\pi}{4}\right)\right]$	14. $4\left[\cos\left(\frac{\pi}{6}\right) + i\sin\left(\frac{\pi}{6}\right)\right]$	15. $5\cos\left(\frac{5\pi}{3}\right) + 5i\sin\left(\frac{5\pi}{3}\right)$

Answers to 3.13 CA #2

1. 	2. 	3. 
4. $(-4, 4\sqrt{3})$	5. $(-\sqrt{2}, -\sqrt{2})$	6. $\left(\frac{9\sqrt{3}}{2}, -\frac{9}{2}\right)$
7. $(3\sqrt{5}, 2.034)$	8. $(\sqrt{53}, 1.292)$	9. $(\sqrt{34}, 4.171)$
10. $\sqrt{17}[\cos(-1.325) + i\sin(-1.325)]$	11. $2\sqrt{13}[\cos(2.553) + i\sin(2.553)]$	12. $\sqrt{58}[\cos(1.165) + i\sin(1.165)]$
13. $-3\sqrt{2} + 3i\sqrt{2}$	14. $2\sqrt{3} + 2i$	15. $\frac{5}{2} - \frac{5i\sqrt{3}}{2}$