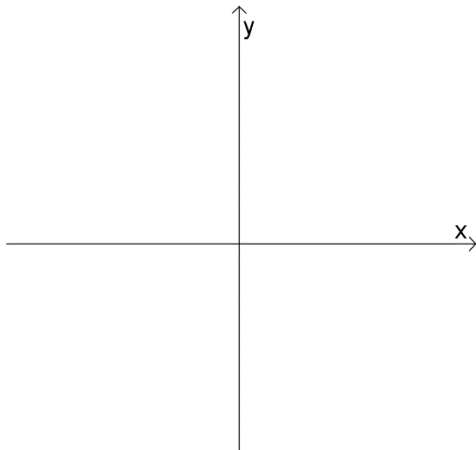
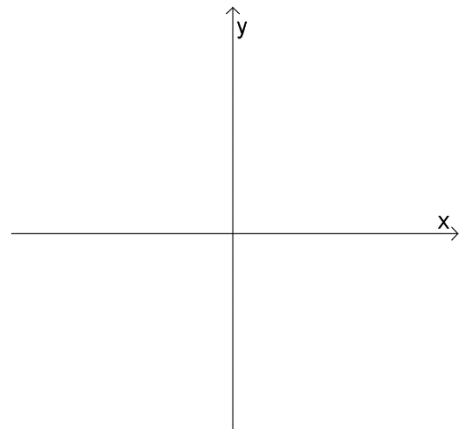


1. Graph the following regions.

$$\frac{4\pi}{3} \leq \theta \leq \frac{5\pi}{3} \text{ and } r \geq 1$$

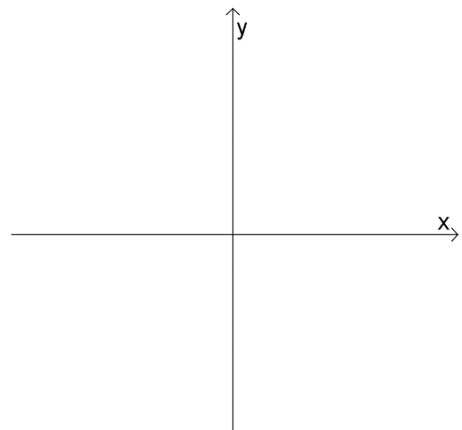


$$0 \leq \theta \leq \frac{3\pi}{2} \text{ and } r = -4$$

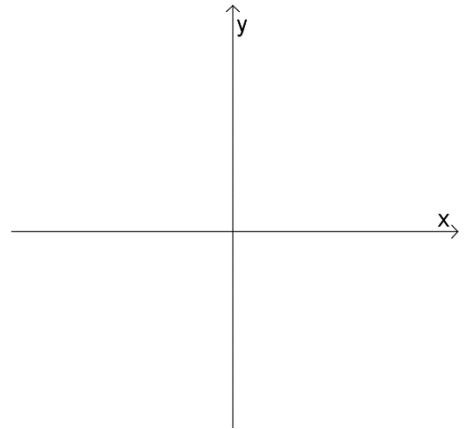


2. Find a polar equation (that has been solved for r) for $x^2 + y^2 = 9$.

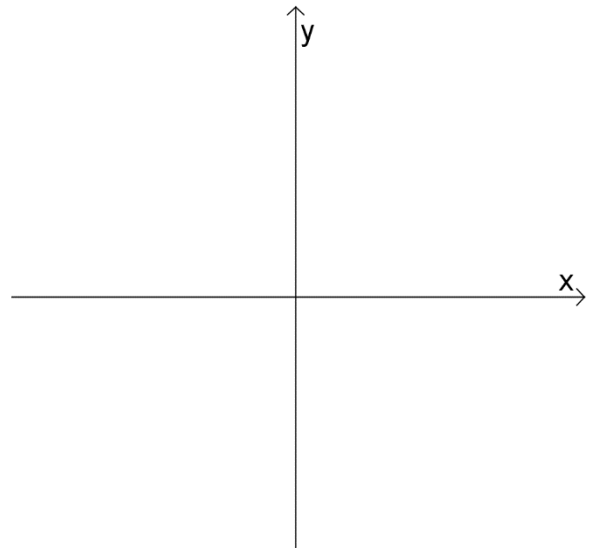
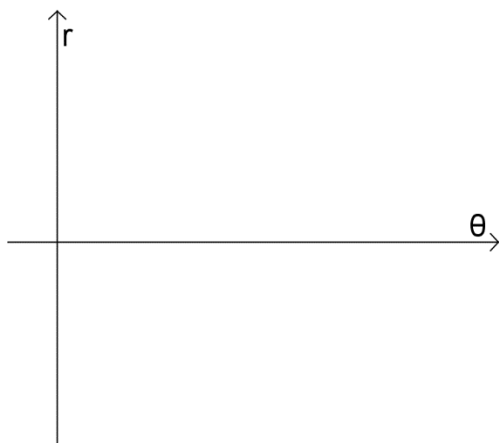
3. Replace $r^2 = 4r \cos \theta$ with an equivalent Cartesian equation. Graph it.



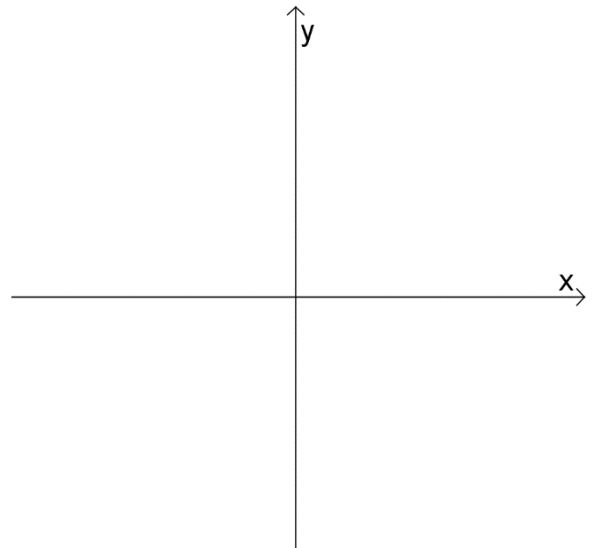
4. Replace $r = -3 \csc \theta$ with an equivalent Cartesian equation. Graph it.



5. Graph the curve $r = 1 + \sin \theta$.



6. Find the slope of the curve $r = \cos 2\theta$ at $\theta = 0, \frac{\pi}{2}, -\frac{\pi}{2},$ and π . Then graph the curve.



Q: Suppose your boyfriend/girlfriend sends you this text message:

A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,V,W,X,Y,Z.

What does the message mean?