

30 points—1-4 4 points each

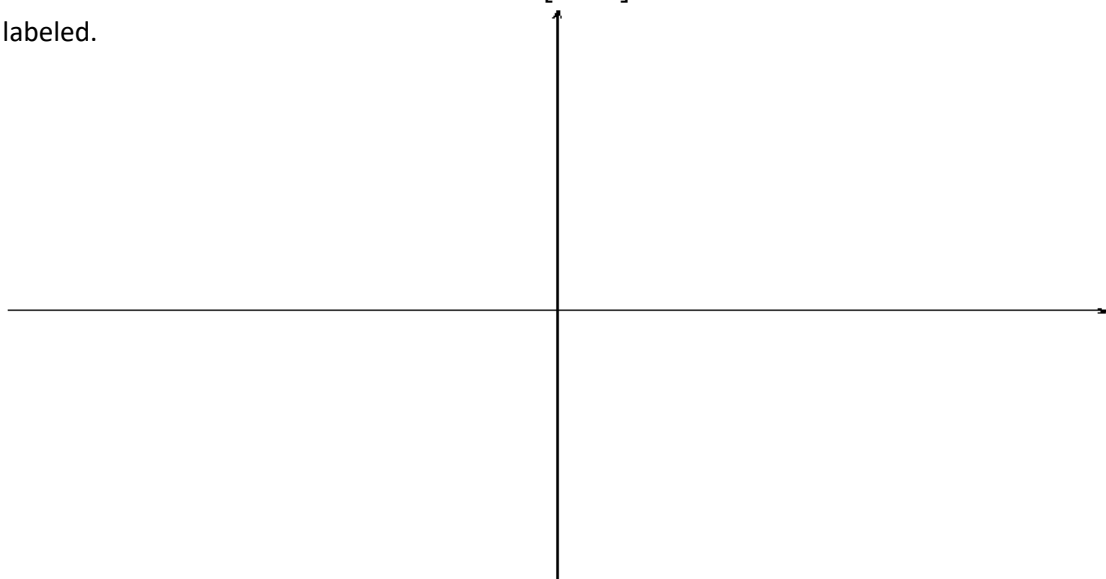
5 6 points

6 3 points

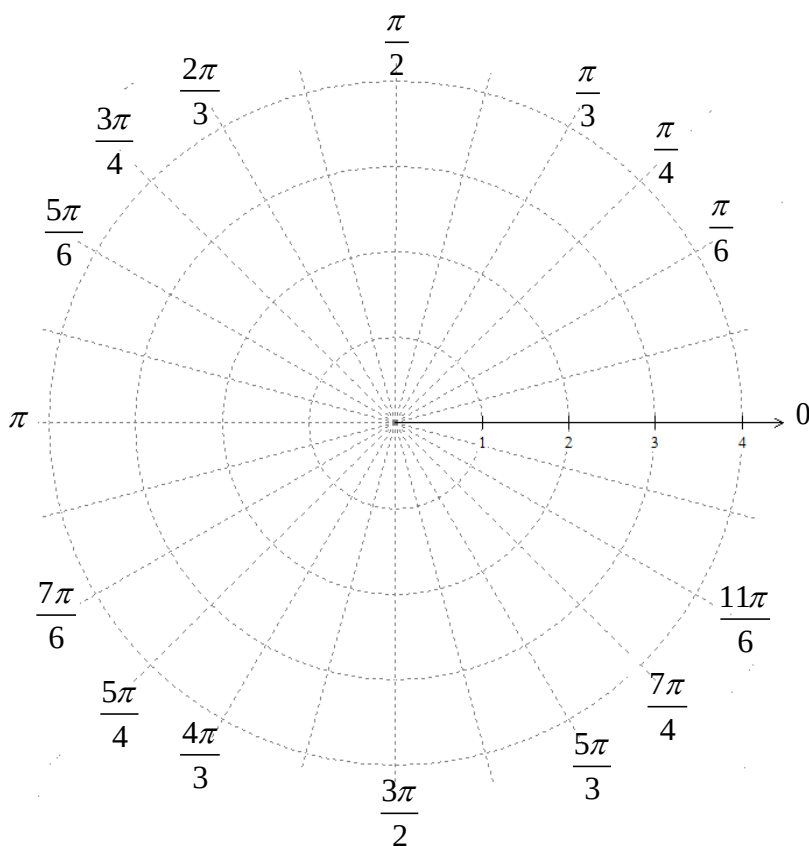
7 5 points

Be sure to show all of your work for each problem!

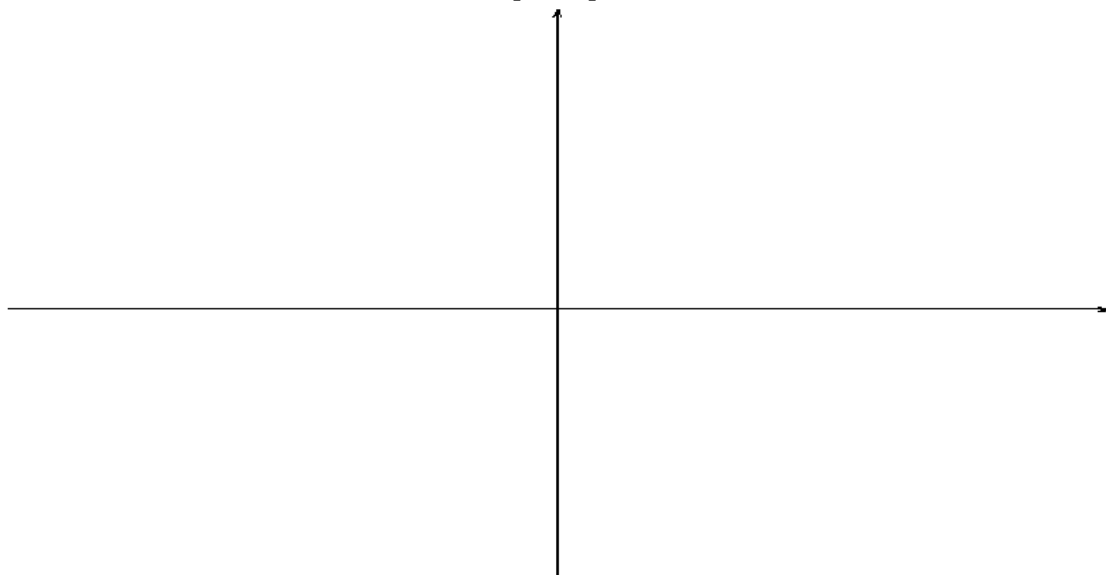
1. Graph $y = 2 + 2 \cos x$ for the interval $x \in [0, 2\pi]$. As we discussed in class, the 5 key points should be clearly labeled.



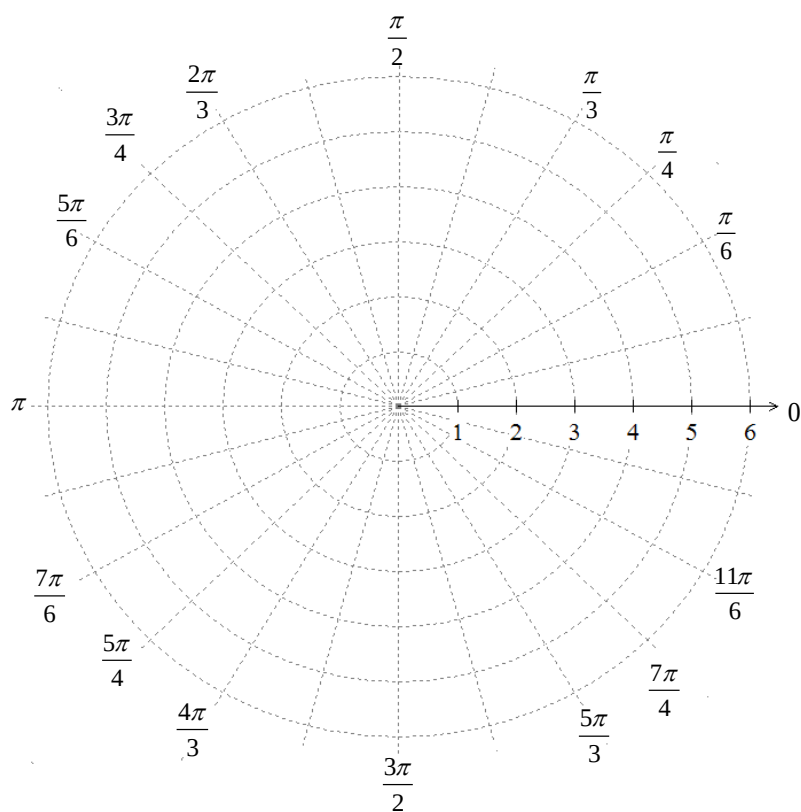
2. Graph $r = 2 + 2 \cos \theta$ neatly.



3. Graph $y = 6\sin 2x$ for the interval $x \in [0, 2\pi]$. Be sure that key points on graph are clearly labelled.



4. Graph $r = 6\sin 2\theta$ neatly.



5. Show all the steps to rewrite the equation in rectangular form. Identify the conic section and write the rectangular equation in standard form.

$$r = \frac{5}{1 - \sin \theta}$$

6. In $\triangle ABC$, $A = 23^\circ$, $B = 124^\circ$, and $c = 95 \text{ cm}$.
Find a to the nearest centimeter.

7. In $\triangle ABC$, $a = 65'$, $b = 87'$, and $c = 42'$.

a) Find B to the nearest degree.

b) Find the area of $\triangle ABC$ to the nearest square foot.