Polar Review Sheet

1. Change from polar to rectangular : 

2. Change from rectangular to polar (points): 

3. Change from polar to rectangular (equations): 

4. Change from rectangular to polar (equations): 

5. Find the horizontal and vertical tangents lines on the curve .

6. Find the length of the curve on the interval .

7. Find the area of the region of the inner loop of the limaçon .

8. Find the common interior on  and .

9. Find the tangent lines at the pole of .

10. Calculate the distance around the curve .

11. Find the area bounded by .

12. Find the equation of the tangent line to  when 

13. Find the area between the loops of .

14. Find the length around one petal of .

15. Find the area of the region bounded by  and .

16. Find the tangents at the pole for .

17. a. Find $\frac{dr}{dθ}$ for $r=cosθ$ at $θ=\frac{3π}{4}$.

 b. What does this fact say about r?

 c. What does this fact say about the curve?