1. Find the domain of:  
2. Find the following of the given rational function:  and sketch 

*Vertical Asymptote:*

*Horizontal Asymptote:*

*x-intercepts*

*y-intercepts*

*Hole:*

1. Solve the equation: 
2. Solve the equation: 
3. Find the solution of the equation  that are in the interval [0, 2π)
4. Given , determine the following, and sketch  (***label*** *the graph*)
5. Find the specified term of the arithmetic sequence that has two given terms
6. Express the sum in terms of summation notation 
7. Find the sum of the infinite geometric series if it exists: 
8. Find the *n*th term, and the tenth term of the sequence 
9. Evaluate
10. Use the binomial theorem to expand and simplify 
11. Prove that the statement is true for every positive integer *n*.  is odd
12. Find the vertices, minors and foci of the ellipse, and then sketch the graph of
13. Find the ***center***, ***vertices***, the ***endpoints***, the ***foci***, and the equations of the ***asymptotes*** of the hyperbola. 