1. Factor and simplify:.
2. Find  if .
3. Given  and , find,,  and its domain.
4. Be able to tell whether or not an equation or a graph is a 1-1 function.
5. Find the inverse of .
6. Use the Intermediate Value Theorem to show the there is a zero between 1 and 2 for the function . Explain yourself.
7. Given the function , find function f(-2) two ways.
8. List all possible rational roots for .
9. Find all actual roots for .
10. 
11. 
12. 

For #13-15, be able to find limits from a graph. Find all asymptotes (horizontal, oblique, and vertical) and holes for the following functions:

1. 
2. 
3. 
4. Be able to graph piecewise functions.
5. Graph one period of .
6. Graph .
7. Graph one period of .
8. 
9. 
10. 
11. 
12. 
13. 
14. =

Solve the trigonometric equations on the interval [0,2π)

1. 
2. 
3. 
4. 
5. Find the first 4 terms and the ninth term of the sequence:

Is the following sequence arithmetic, geometric, or neither? If arithmetic or geometric, find **d** or **r** AND **an**.

1. 7, 3, -1, -5, -9, …
2. 2, 3, 5, 8, 19, 27, …
3. 8, -4, 2, -1, ½, …

Identify, discuss, and graph all important values, points, and asymptotes.

1. 
2. 
3. 