Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Directions: You may use a scientific calculator to complete this test. Put a box around your answers. Show all work for partial credit.

Simplify. Write your answer as one rational expression.

1. 

Solve the equation for x.

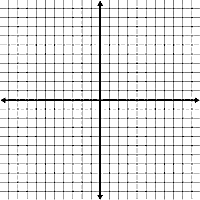
1. 

Solve the equation for s.

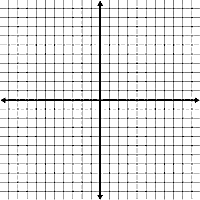
1. 

Solve the inequality. Write your answer in interval notation.

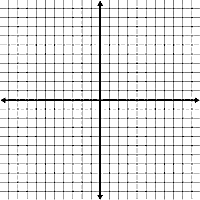
1. 
2. Find  if .



1. Graph .
2. Find the domain of f(x) if .
3. Find the inverse function of 
4. Given  and , findand its domain.
5. If we make a box out of an 8.5” x 11” sheet of paper by cutting squares of equal size out of each corner and folding the edges, what is the volume of the box in terms of x?
6. Graph



1. Graph 



1. Find the x and y-intercepts for 

Determine if the sequence is arithmetic, geometric, or neither. Find the difference **d** AND an or the ratio **r** AND an.

1. 17, 10, 3, -4,…
2. 1, 1, 2, 3, 5, 8, …
3. …

For 18 & 19, find an, a19, and S19 for the following:

1. 3, -6, 12, -24, …
2. -1, 3, 7, 11, …
3. Find the infinite sum of: 8, 4, 2, 1, ½, ...
4. Mr. Bell has decided to make the class a bunch of chocolate chip cookies. Due to his budget, Mr. Bell will need to mix in some store brand cookie dough ($1.50/lb) with Nestle© cookie dough ($3.30/lb). Mr. Bell can only spend $20.00 to get 10 pounds of cookie dough ($2.00/lb). How much of each brand will he need? Round to the nearest tenth of a pound.