Homework Week #14 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***“In order to succeed, we must first believe that we can!” –***Nikos Kazantzakis

1. Find the inverse of the following function:

$$f(x)=x^{2}+7$$

1. Find the inverse of the following function:

$$y= 3x+2$$

1. 
2. 

Solve the following:

|  |  |
| --- | --- |
| $\frac{2}{x-3}-\frac{4}{x+4}$  | $$\frac{3x}{x^{2}-9}+ \frac{4}{x-3}$$ |
| $$\frac{3x}{(x+3)}-\frac{ 7x}{(x+5)}$$ | $\frac{2x+8}{x^{2}-16}-\frac{3}{x-4}$  |
| $$\frac{x^{2}-x-2}{x^{2}+2x+1} ÷ \frac{x^{2}-8x+12}{x+1}$$ | $$\frac{(x^{2}+7x+12)}{(x+4)}×\frac{(x+5)}{x^{2}-25}$$ |

Identify the center and the radius of the following circles:

1. x2 + 8x + y2 + 6y = 0
2. x2 + 12x + y2 – 10y = 12
3. x2 + 12x + y2 + 4y = 5

Log Review:

1.

2.

3.

Solve for x.

4. $log\_{7}64- log\_{7}x^{2}=log\_{7}$4

Convert from logarithmic form to exponential form.

5. 

Solve for x.

6. 

Solve for x.

7.