Spiral review 7 Precalculus Name:_____

1. Identify the transformations from the parent function: $f(x) = 20\left(\frac{2}{3}\right)^{x+1} - 3$

2. The function, $f(x) = (x+4)^2 - 7$, is shifted right 8 units and up 9 units, as well as flipped across the x-axis. What is the equation of the transformed function?

3. What is the equation of the horizontal asymptote? $f(x) = 20\left(\frac{2}{3}\right)^{x+1} - 3$

4. What is the domain of the function, $f(x) = \frac{4x^2-49}{x^2-8x-20}$, in interval notation?

5. What is the equation for the inverse of this function? $f(x) = 7^{x-3} + 1$

6. If $f(9) = -3$ and $f(6) = 5$ and $g(-11) = -3$ and $g(8) = 6$, find the value of $f(g(8))$.

7. If $(x+9)$ is a factor of a given polynomial, what do you know is one zero of that polynomial?

8. Identify the domain of the function: $\log_4(x+5) - 9 = f(x)$

9. Find the value(s) of x: $-3 + \sqrt{x+59} = x$

10. Find the ordered pair that represents the y-intercept: $f(x) = \frac{4}{5}(5)^{x+2} - 17$