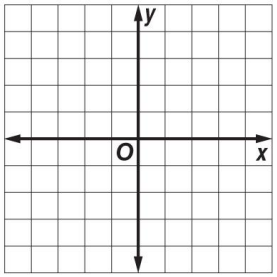
Pre-Calc 3.1 – 3.3 Quick Review Name:_____

Sketch a graph of each function. Then identify what's indicated below.

1) $f(x) = \ln x + 3$



Domain:

Range:

Any intercepts:

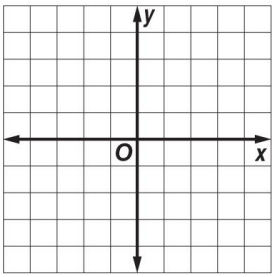
Decreasing:

Increasing:

Asymptote Equation:

End Behavior:

2) $f(x) = e^{(x-1)} - 2$



Domain:

Range:

Any intercepts:

Decreasing:

Increasing:

Asymptote Equation:

End Behavior:

3) In mediaeval times, there were 10,000 people living in a city that was struck by a plague so that people began to die at an exponential rate daily. After 6 days, there were only 8,500 people living. Find the rate as a percentage. Then, determine how many were living after three weeks.

4) Use the change of base formula to evaluate. Route to the nearest thousandth. $\log_{12} 21$

5) Expand: $\ln \frac{z^2(x-1)}{\sqrt[3]{5y+2}}$

6) Condense: $\frac{1}{4}(log_2 5 + log_2 x - log_2 4 - 2log_2 y)$