Name :______ ID. # : ____ SER. # : ____

1. Graph $y = \ln |x| + 2$, Write down the domain, and range.

(4 pts)

2. Find the asymptote and x-intercept of $y = \left(\frac{1}{2}\right)^{x-5} - 4$ (no need for graph) (2 pts)

3. Given $\log 2 = 0.3010$, $\log 3 = 0.4771$, find the value of:

 $\log 0.08$, $\log \sqrt{12}$, $\frac{\ln 3}{\ln 100}$, $e^{(2\ln 5 + \ln 3)}$ (4 pts)