Evaluate each of the following without the use of a calculator.

1. $\quad \log 10=\underline{1}$ $\log _{10} 10$
2. $\quad \ln e=\underline{1}$
$\log _{e} \mathbf{e}$
3. $\quad \log 100=2$
$100=10^{2}$
4. $\log 0.01=-2$
$0.01=10^{-2}$
5. $\quad \ln \mathrm{e}^{2}=\underline{2}$
$2 \ln \mathrm{e}$
6. $\quad \ln \mathrm{e}^{-2}=\underline{-2}$ -2ln e

Use a calculator to evaluate each of the following. Express your answers rounded to the nearest hundredth.
11. $\log 30=1.47$
15. $\quad \ln 30=\underline{3.40}$
16. $\ln 0.5=\underline{-0.69}$

