

- 3** (a) Since $10^1 \leq 79 \leq 10^2$, $\log 10^1 \leq \log 79 \leq \log 10^2 \Rightarrow 1 \leq \log 79 \leq 2 \Rightarrow n = 1$. $\log 79 \approx 1.898$
- (b) Since $10^2 \leq 500 \leq 10^3$, $\log 10^2 \leq \log 500 \leq \log 10^3 \Rightarrow 2 \leq \log 500 \leq 3 \Rightarrow n = 2$. $\log 500 \approx 2.699$
- (c) Since $10^0 \leq 5 \leq 10^1$, $\log 10^0 \leq \log 5 \leq \log 10^1 \Rightarrow 0 \leq \log 5 \leq 1 \Rightarrow n = 0$. $\log 5 \approx 0.699$
- (d) Since $10^{-1} \leq 0.5 \leq 10^0$, $\log 10^{-1} \leq \log 0.5 \leq \log 10^0 \Rightarrow -1 \leq \log 0.5 \leq 0 \Rightarrow n = -1$.
 $\log 0.5 \approx -0.3010$