

$$\begin{aligned}
\Delta \left(\log_{10} (a) \right) &= \left| \frac{\Delta a}{a \times \ln (10)} \right| \\
&= \left| \frac{0.25}{5 \times 2.302585092994046} \right| \\
&= 0.02171472409516259
\end{aligned}$$