

$$\begin{aligned}
 \text{rate} &= -\frac{1}{3} \frac{\Delta[I^-]}{\Delta t} = \frac{1}{2} \frac{\Delta[SO_4^{2-}]}{\Delta t} \\
 -\frac{1}{3} \frac{-1.0 * 10^{-3} M}{\Delta t} &= \frac{1}{2} \frac{\Delta[SO_4^{2-}]}{\Delta t} \\
 -\frac{1}{3}(-1.0 * 10^{-3} M) &= \frac{1}{2} \Delta[SO_4^{2-}] \\
 \frac{2}{3}(1.0 * 10^{-3} M) &= \Delta[SO_4^{2-}]
 \end{aligned}$$

$$\Delta[SO_4^{2-}] = [SO_4^{2-}]_{10s} - [SO_4^{2-}]_{\text{initial}} = [SO_4^{2-}]_{10s} = 6.67 * 10^{-4} M$$

We would expect the concentration of sulfate ions in the solution at t = 10 s to be **0.00067 M**