

## Instantaneous Rates

Sunday, February 24, 2019 8:45 AM

Instantaneous Rate - rate at a specific moment in time  
= slope of the line tangent to the curve at the given time

### Instantaneous Rates

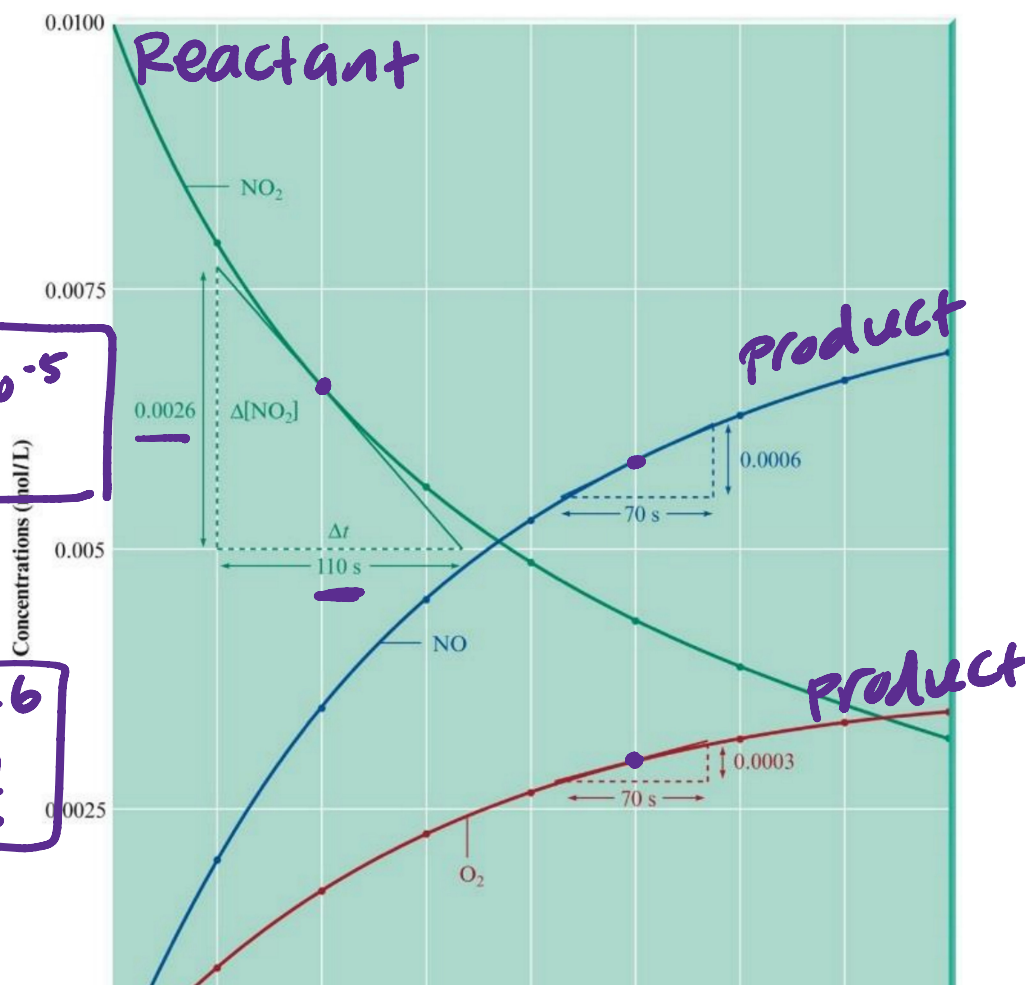
1. Calculate the instantaneous rate for the reactant at 100 s.

$$-\frac{0.0026 \text{ M}}{110 \text{ s}} = -2.4 \times 10^{-5} \frac{\text{M}}{\text{s}}$$

2. Calculate the instantaneous rate of formation of NO at 250 s.

$$+\frac{0.0006 \text{ M}}{70 \text{ s}} = 9 \times 10^{-6} \frac{\text{M}}{\text{s}}$$

3. Calculate the instantaneous rate of formation of O<sub>2</sub> at 250 s.



formation of  $O_2$  at 250 s.

$$+ \frac{0.0003 \text{ M}}{70 \text{ s}} = \boxed{4 \times 10^{-6} \frac{\text{M}}{\text{s}}}$$

