

#1) Patient H.G. was given 1000mg drug X as an i.v. bolus. Determined plasma concentration-time profiles are listed in the table below.

time (h)	Plasma concentration (mg/L)
0	50
1.5	32
4	15
7	6
10	2.5
15	0.5

- Determine whether the drug follows a **zero-** or a **first-order** elimination process!
- Calculate the elimination rate constant (k_e)!
- Calculate $AUC_{0 \rightarrow \infty}$!
- Can you predict what the concentration of drug X after two half-lives will be?

#2) Which of the following statements best describes a zero or a first order process?

- The same amount of drug is eliminated during a given time interval.
- The same fraction of drug is eliminated during a given time interval.
- Given a one-compartment body-model, a concentration vs. time profile after an i.v. bolus shows a straight line on a linear scale.
- Given a one-compartment body-model, a concentration vs. time profile after an i.v. bolus shows a straight line on a semi-log scale.