

26 Half-life and the rate constant – Part 2 —Answers

Answers

Work through these after trying the questions yourself.

26.6 The time for the concentration to halve.

26.7 No.

26.8 They are all equal.

26.9 $k = 0.693/t_{1/2}$.

26.10 $k = 0.693/0.693 = 1 \text{ s}^{-1}$.

26.11 The half-life is *constant* (30 s each time), which shows the reaction is *first order*.
The rate constant is $k = 0.693/t_{1/2} = 0.693/30 = 0.023 \text{ s}^{-1}$.