Task:

The polynomial $G(x) = -0.006 \cdot x^4 + 0.140 \cdot x^3 - 0.530 \cdot x^2 + 1.790 \cdot x$ measures the concentration of a dye in the bloodstream x seconds after it is injected. Does the concentration increase between 12 and 13 seconds?

Solution:

$G(x) = -0.006 \cdot x^4 + 0.140 \cdot x^3 - 0.530 \cdot x^2 + 1.790 \cdot x$

$G(12) = 62.664$

$G(13) = 69.914$

$G(13) > G(12)$

Answer:

The concentration increases between 12 and 13 seconds