Answer on Question #50590 – Math – Calculus

Water is poured steadily into an empty container. If the volume of water in the container after 5 seconds is 30 cm^3 , find:

a) The rate of change of volume

b) The volume of water after 12 seconds

Solution.

a) $\boldsymbol{Rate\ of\ change\ of\ volume\ = \frac{change\ in\ volume}{change\ in\ time} = \frac{30-0}{5-0} = 6\ \frac{cm^3}{s}.}$

b) $\boldsymbol{The\ volume\ of\ water\ after\ 12\ seconds = 6\frac{cm^3}{sec} * 12\ sec = 72\ cm^3.}$