Answer on Question #41477, Math, Calculus

Since the rate is $v(t) = 1000 \cdot [6t(2t+1) - 2] \dfrac{m^3}{day}$, the amount of water, which overflows during the

second day is $V = \int_2^3 v(t)\, dt = 1000 \int_2^3 (6t(2t+1) - 2)\, dt = 1000(4t^3 + 3t^2 - 2t)\vert_2^3 = 1000 \cdot 89 = 89000\, m^3$.