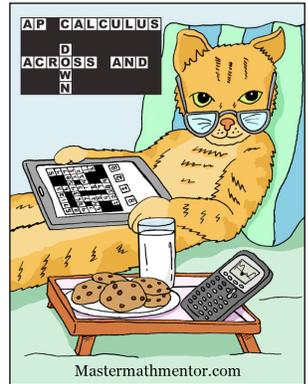


AP Calculus – Across and Down

Clue Set: #16

Topic: Accumulation Function

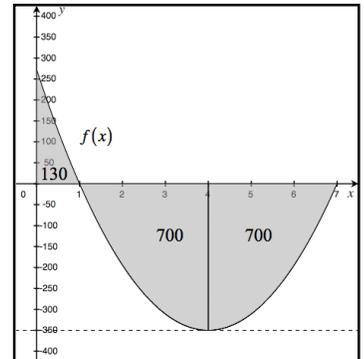
Only digits (0 – 9) and negative signs are allowed. If an answer is an integer, use leading zeros to make the answer fit. (Ex: If 4 digits are required and your answer is 46, enter 0046.) If an answer has decimal places, the decimal point is dropped and trailing zeros are used to make the answer fit to the required number of decimal places which is specified in the problem. (Ex: If 2 decimal places are required and your answer is 12.4682, round to 12.47 and enter 1247. If one decimal place is required and your answer is 15, write 15.0 and enter 150. If one decimal place is required and your answer is 0.5, wrote 05.)



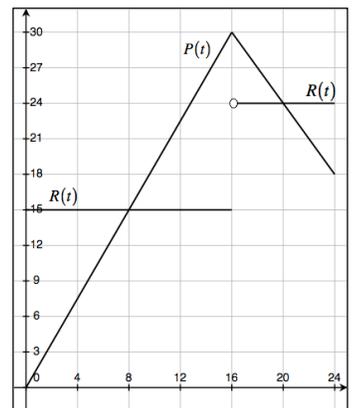
Across

A11. Let $f(x)$ be given in the figure to the right. The areas between the

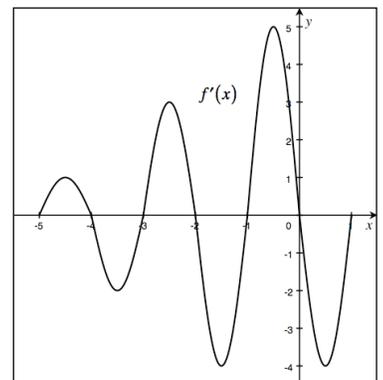
curve and $f(x)$ are given. If $F(x) = \int_0^x f(t) dt$, find $F'(4)$.



A29. Rocks are placed on a conveyor belt to be pulverized by several pieces of machinery. Let $R(t)$, made up of 2 discontinuous lines as shown by the graph to the right, represent the rate that rocks are placed on the conveyor belt. Let $P(t)$, also made up of two continuous lines represent the rate that the rocks are pulverized. $R(t)$ and $P(t)$ are measured in rocks per minute and t is measured in minutes on the interval $0 \leq t \leq 24$. If there were 20 rocks on the conveyor belt when the machinery was started up, how many rocks are on the conveyor belt waiting to be pulverized when this number is a maximum?



A33. The graph of $f'(x)$ is shown in the figure to the right. What is the value of x for which $f(x)$ has its absolute minimum?



Down

None