

TeX code compiled with `\documentclass{beamer}` using the Amsterdam theme.

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\begin{document} \begin{frame} Find the average value of each function on the given interval. \vskip 10pt
\begin{enumerate}[a] \item $ f(x) = 10x - x^2 $ on the interval $ [0, 2] $ \vskip 15pt \item $ f(\theta) = 11
\sec^2(\theta/4) $ on the interval $ [0, \pi] $ \vskip 15pt \item $ h(x) = 7 \cos^4(x)\sin(x) $ on the interval $ [0, \pi] $
\end{enumerate} \end{frame} \begin{frame} Consider the function $ f(x) = 3\sqrt{x} $ \begin{enumerate}[a]
\item Find the average value $ f_{\text{ave}} $ of $ f $ on the interval $ [0, 16] $. \item Find all values $ c $ such that
$ f_{\text{ave}} = f(c) $. \item Sketch the graph of $ f $ and, in the same picture, a rectangle whose area is the
same as the area under the graph of $ f $. \end{enumerate} \end{frame} \begin{frame} Consider the function
$ f(x) = (x-5)^2 $ \begin{enumerate}[a] \item Find the average value $ f_{\text{ave}} $ of $ f $ on the interval
$ [4, 7] $. \item Find all values $ c $ such that $ f_{\text{ave}} = f(c) $. \item Sketch the graph of $ f $ and, in the same
picture, a rectangle whose area is the same as the area under the graph of $ f $. \end{enumerate} \end{frame}
\begin{frame} Consider the function $ f(x) = 9 \sin(4x) $ \begin{enumerate}[a] \item Find the average value
$ f_{\text{ave}} $ of $ f $ on the interval $ [-\pi, \pi] $. \item Find all values $ c $ such that $ f_{\text{ave}} = f(c) $.
\item Sketch the graph of $ f $ and, in the same picture, a rectangle whose area is the same as the area under the
graph of $ f $. \end{enumerate} \end{frame} \begin{frame} Find all numbers $ b $ such that the average value of
$ f(x) = 7 + 10x - 9x^2 $ on the interval $ [0, b] $ is equal to 8. \vskip 65pt The velocity $ v $ of blood that flows in a
blood vessel with radius $ R $ and length $ L $ at a distance $ r $ from the central axis is $ v(r) = \frac{P}{4\eta}
L(R^2 - r^2) $ where $ P $ is the pressure difference between the ends of the vessel and $ \eta $ is the viscosity of
the blood. Find the average velocity (with respect to $ r $) over the interval $ 0 \leq r \leq R $. \end{frame}
\end{document}

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From:

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