TeX code compiled with \documentclass{beamer} using the Amsterdam theme.
There is one png image needed to compile slides:

graph1.png

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\begin{document} \begin{frame} \begin{block}{} \begin{center} {\LARGE \textbf{True} or \textbf{False}}
\end{center} \end{block} \vskip 20pt If a piece of string has been chopped into $n$ small pieces and the $i^{th}$
piece is $\Delta x_i$ inches long, then the total length of the string is exactly $\displaystyle{ \sum_{i=1}^n\Delta
x_i}$. \end{frame} \begin{frame} The table gives the values of a function obtained from an experiment. Use them
to estimate $\displaystyle\int_3^9 f(x) dx$ using three equal subintervals: \begin{itemize} \item first with right
endpoints, \item then with left endpoints, \item and finally with midpoints. \end{itemize} \vskip 10pt $$
\begin{array}{|c|c|c|c|c|c|c|c|} \hline x & 3 & 4 & 5 & 6 & 7 & 8& 9\\ \hline f(x)& -3.6& -2.1 &-0.5& 0.3& 0.8& 1.5
&1.8 \\ \hline \end{array}$$ \vskip 15pt \pause If the function is known to be an increasing function, can you say
whether any of your three estimates is less than or greater than the exact value of the integral? \end{frame}
\begin{frame} Express $$\int_1^3\frac{x}{2+x^4}dx$$ as a limit of Riemann sums. \pause \vskip 60pt Express
$$\lim_{n\to\infty}\sum_{i=1}^n \frac{\cos\left(2\pi+\frac{\pi}{n}\right)}
{2\pi+\frac{\pi}{n}}\left(\frac{\pi}{n}\right)$$ as a definite integral. \end{frame} \begin{frame} The graph of $f$
is shown. Evaluate each integral by interpreting it in terms of areas. \begin{center}
\includegraphics[height=1.65in]{graph1.png} \end{center} \begin{enumerate}[a)] \item
$\displaystyle\int_0^{12} f(x)dx$ \item $\displaystyle\int_0^{30} f(x)dx$ \item $\displaystyle\int_{30}^{42}
f(x)dx$ \end{enumerate} \end{frame} \begin{frame} Evaluate each integral by interpreting it in terms of areas.
\vskip 5pt \begin{enumerate}[a)] \item $$\int_{-10}^0\left(4+\sqrt{100-x^2}\right)dx$$ \vskip 15pt \item
$$\int_0^{12} |x-6| dx$$ \end{enumerate} \end{frame} \begin{frame} If $\displaystyle\int_0^6f(x)dx=9$ and
$\displaystyle\int_0^6g(x)dx=4$, find $\displaystyle\int_0^6(3f(x)+4g(x))dx$ \vskip 45pt Given that
$\displaystyle\int_0^1 15x\sqrt{x^2+4}dx=25\sqrt{5}-40$, what is $$\displaystyle\int_1^0
15u\sqrt{u^2+4}du\,\,?$$ \vskip 45pt Given that $\displaystyle\int_0^1 x^2 dx=\dfrac{1}{3}$, what is
$\displaystyle\int_0^1 (8-6x^2)dx$? \end{frame} \begin{frame} Given that $\displaystyle\int_a^b
xdx=\dfrac{b^2-a^2}{2}$ and $\displaystyle\int_0^{\pi/2}\cos(x) dx=1$, evaluate
$$\displaystyle\int_0^{\pi/2}(2\cos(x)-4x)dx$$ \vskip 60pt Write $\displaystyle\int_{-6}^2 f(x)dx
+\displaystyle\int_{2}^5 f(x)dx- \displaystyle\int_{-6}^{-3} f(x)dx$ as a single integral. \end{frame}
\begin{frame} If $\displaystyle\int_1^5 f(x)dx=12$ and $\displaystyle\int_4^5 f(x)dx=7$, find
$\displaystyle\int_1^4 f(x)dx$. \vskip 90pt Suppose $f$ has absolute minimum value $m$ and absolute maximum
value $M$. What bounds can you give for $\displaystyle\int_3^6 f(x)dx$? \end{frame} \begin{frame} This problem
and the next are a preview of Section 4.3. \begin{enumerate}[a)] \item Draw the graph $y=2t+1$ and use
geometry to find the area under this line, above the $t$-axis, and between the vertical lines $t=1$ and $t=3$.
\vskip 25pt \item If $x>1$, let $A(x)$ be the area of the region that lies under the line $y=2t+1$ between $t=1$
and $t=x$. Sketch this region and use geometry to find an expression for $A(x)$. \vskip 25pt \item Differentiate
$A(x)$. Notice anything? \end{enumerate} \end{frame} \begin{frame} \begin{enumerate}[a)] \item If $x>1$, let
$$A(x)=\int_1^x(1+t^2)dt.$$ $A(x)$ represents the area of a region. Sketch that region. \item Given that
$\displaystyle\int_a^b t^2 dt=\frac{b^3-a^3}{3}$, find an expression for $A(x)$. \item Differentiate $A(x)$.
Notice anything? \pause \item If $x\geq 1$ and $h$ is a small positive number, then $A(x+h)-A(x)$ represents the
area of a region. Sketch that region. \item Draw a rectangle that approximates the region from (d). Use this
approximation to see that $$\frac{A(x+h)-A(x)}{h}\approx 1+x^2$$ \item Use part (e) to give an intuitive
explanation for the result of part (c). \end{enumerate} \end{frame} \end{document}
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