

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

```
\begin{document} \begin{frame} The region  $R$  is bounded by the curves  $y=x^3$   $\hspace{20pt}$   $y=8$   $\hspace{20pt}$ 
 $x=0$  Sketch  $R$ . For the following rotational axes, set-up two integrals for the volume of the solid
generated by revolving  $R$  about the indicated axis, one representing the washer method and one the cylindrical
shells method. \begin{itemize} \item[\b{a)}]  $x$ -axis. \item[\b{b)}]  $y$ -axis. \item[\b{c)}]  $y=5$ . \item[\b{d)}]
```

$x=-2$. \end{itemize} \end{frame} \begin{frame} The region R is bounded by the curves $y=1+\sin(x)$ $\hspace{20pt}$ $y=1$ $\hspace{20pt}$ $x=0$ $\hspace{20pt}$ $x=2$ Sketch R . For the following rotational axes, **set-up** two integrals for the volume of the solid generated by revolving R about the indicated axis, one representing the washer method and one the cylindrical shells method. \begin{itemize} \item[\b{a)}] x -axis. \item[\b{b)}] y -axis. \item[\b{c)}] $y=-1$. \end{itemize} \end{frame} \begin{frame} The triangular region with vertices $(0,2)$, $(1,0)$, and $(0,1)$ is rotated about the line $x=4$. Find the volume of the solid generated by this rotation. \end{frame} \begin{frame} Let B be the region bounded by the graphs of $x=y^2$ and $x=9$. Sketch B . For each part below, find the volume of the solid that has B as its base if every cross section by a plane perpendicular to the x -axis is \begin{itemize} \item[\b{a)}] a square. \item[\b{b)}] a semicircle with diameter lying on B . \item[\b{c)}] an equilateral triangle. \end{itemize} \end{frame} \begin{frame} Find the volume of a wedge cut out of a cylinder of radius r if the angle between the top and bottom of the wedge is $\frac{\pi}{6}$. \end{frame} \end{document}

From:

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https://www2.math.binghamton.edu/p/calculus/resources/calculus_flipped_resources/applications/5.3_cylindrical_shells_tex

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