

Problem 17

If the curve $y = e^{-x/10} \sin x$, $x \geq 0$, is rotated about the x -axis, the resulting solid looks like an infinite decreasing string of beads.

- (a) Find the exact volume of the n th bead. (Use either a table of integrals or a computer algebra system.)
- (b) Find the total volume of the beads.