I chose to use Reigon B (bounded by x=0, y=sqrt(x), and x=9) and the semicircle as my cross section. The integral to calculate the volume is the integral of the area of each slice.

$$\begin{aligned}
&\int_0^9 \pi {r_x}^2 dx \\
=&\int_0^9 \pi \left(\frac{\sqrt{x}}{2}\right)^2 dx \\
=&\frac{\pi}{4}\int_0^9 x dx \\
=&\frac{\pi}{8}9^2 \\
=&\boxed{\frac{81\pi}{8}}
\end{aligned}$$

This value is corroborated to four decimal points using the slice generator, seen here: