1. A solid lies between the planes perpendicular to the x-axis at $x = 0$ and $x = 2$. The cross-sections perpendicular to the x-axis between these planes are squares whose bases run from the curve $y = x^2$ to the curve $y = 2x$. Find the volume.

2. Find the volume of the solid generated by revolving the region bounded by the curves below about the x-axis.

$y = 2\sqrt{x}, y = 2, x = 0$

Q: What can you catch, but not throw?