The quiz is double-sided and there are 2 problems with a total score of 20. You have 20 minutes to solve all the problems on your own. Calculators are allowed but should not be useful. Please print your name and section number at the top-right corner before you start.

Problem 1  (6 points) Find the volume of the solid bounded the coordinate planes and $x + y^{1/2} + z^{1/3} = 1$ with coordinate change $x = u$, $y = v^2$ and $z = w^3$. 
Problem 2  (14 points) Find the volume of the paraboloid bounded by $y^2 + 2z^2 = 4x$ and the plane $x = 2$. 