Magnet Analysis 1A Name_____
Rose

Volume, Related Rates, Fundamental Theorem of Calculus Problem

The curve $y = x^4$ from $x = 0$ to $x = 2$ is rotated about the y-axis to form a bowl-shaped water tank. Water is being pumped into this tank at the rate of 10 ft^3/min. If the tank is empty at time $t = 0$, at what rate is the height of the water level in tank changing after 5 seconds?