QUIZ MATH 151 Sections 525-527
WEEK 7

NAME_____ SECTION_____

Show all you work and box your final answer.

1. [15pts] If $h(x) = (1-x)^5$ find $h''(x)$.

2. [25pts] What is the slope of the tangent line to the graph of $x = 2t^2, y = t^3 - 3t$ at the point $(2, -2)$?

3. [25pts] Find all point(s) on the curve $x = t^3 - 6t^2 - 1$, $y = t^2 - 7t + 2$ where the tangent line is vertical.

4. [30pts] The radius of a right circular cylinder is increasing at a rate of 2cm/min and the height is decreasing at a rate of 3cm/min. At what rate is the volume changing when the radius is 10cm and the height is 12cm? Is the volume increasing or decreasing? (hint: the area of the base of the cylinder times the height of the cylinder gives its volume.)