

QUIZ 4 - MATH 152

Friday, October 1

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

In this quiz you will be asked to create a right circular cone, i.e., a cone with a circular base, by revolving a region around the x -axis. Please, read each of the following problems carefully.

1. Let $y = f(x)$ be a function. If the region between the graph of $y = f(x)$ from $x = 0$ to $x = h$ is revolved around the x -axis, the resulting solid of revolution is a right circular cone with base of radius r and height h . Find a formula for $y = f(x)$.
2. Compute the volume of the right circular cone with base of radius r and height h that you created in the previous part.