QUIZ 6 - MATH 152 YOUR NAME:

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!!

1. Find the center of mass of the plate formed under the curve

 $f(x) = \cos x$ over the interval $[0, \frac{\pi}{2}]$.

2. Find the 3rd Taylor Polynomial $T_3(x)$ of $f(x) = xe^{-x^2}$ around a = 0. Note: This is the same as the 3rd Maclaurin Polynomial $M_3(x)$.