

Name _____ Student number _____ Quiz
section: _____

There are two problems in this quiz (the other one is on the back of this page), total of 20 points. Write legibly and show your work fully.

1. (10 points) Find the average value of the function $f(x) = x^3 \cos(x^2)$ on the interval $[0, \sqrt{\pi/2}]$.

2. (10 points) Find the area of the region bounded below by $y = \sin x \cos x$ and bounded above by $y = 1 + \tan^3 x \sec x$ for $0 \leq x \leq \pi/4$.