

Name: _____

MATH 19 QUIZ
15 SEPTEMBER 2016
BROWN UNIVERSITY
INSTRUCTOR: SAMUEL S. WATSON

1. Find a function $f(x)$ with the property that $\int_0^{2\pi} f(x) \cos x = 6$ and $\int_0^{2\pi} f(x) \cos 2x dx = 13$. (Hint: consider functions of the following form: some constant times $\cos x$ plus another constant times $\cos 2x$).

2. Find an anti-derivative of the function $\sec x \tan^3 x$.