

Answer all questions and show your work. Unsupported answers may receive *no credit*. You may not use a calculator on this quiz. Allow 15 minutes for the quiz.

Name: _____ Section: _____

1. (4 points) Use the definition of a Taylor series to find the first two nonzero terms of the Taylor series for $\cos^2 x$ centered at $a = 0$.

2. (a) (4 points) Find the average value of $f(x) = (x - 3)^2$ on $[2, 5]$.

- (b) (2 points) Find a c so that $f(c)$ is the average value of f .