

Quiz #5

Directions: Carefully read each question below and answer to the best of your ability in the space provided. You **MUST** show your work to receive full credit!

1. (5 points) Find the limit

$$\lim_{x \rightarrow \infty} \frac{\cos^2(x)}{x^5}$$

using the sandwich theorem.

2. (5 points) Let

$$f(x) = 12x^3 + 11x^2 + 34x - 65.$$

Show using the intermediate value theorem, that f has a zero in the interval $[0, 2]$. Then use the intermediate value theorem, determine if this zero lies in $[0, 1]$ or $[1, 2]$.

Name: _____

Section (circle one): 003 004

Question:	1	2	Total
Points:	5	5	10
Score:			