

Name: _____

QUIZ 19 

MATH 200
April 7, 2022

1. Consider $f(x) = x + \sin(x)$ on $[0, 2\pi]$. Find *all* numbers c in $(0, 2\pi)$ guaranteed by the mean value theorem.

2. Find the linear approximation $L(x)$ for the function $f(x) = x + \frac{3}{x}$ at $x = 3$.

Name: _____

1. Consider $f(x) = 2 + \cos(x)$ on $[0, 2\pi]$. Find *all* numbers c in $(0, 2\pi)$ guaranteed by the mean value theorem.

2. Find the linear approximation $L(x)$ for the function $f(x) = 2e^x - x$ at $x = \ln(3)$.