

Quiz 6 Calculus 1 Due 10/31/2012

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. a) Find the linear approximation $L(x)$ for $f(x) = \sqrt[3]{x}$ at 8.

b) Use your linearization from part a to approximate $\sqrt[3]{8.01}$.

c) Use your linearization from part a to approximate $\sqrt[3]{8.1}$.

d) Use your Linearization from part a to approximate $\sqrt[3]{27}$.

2. a) Find the linear approximation $L(x)$ for $f(x) = \arctan x$ at 0.

b) Use your Linearization from part a to approximate $\arctan 0.1$.

