

Unit 4 Worksheet 2

Name _____

AP Calculus AB

Date _____

Decide whether or not the Mean Value Theorem applies. If it applies, find the values of x that satisfy the theorem.

1. $f(x) = x^2 + 2x$ $[-2,2]$

2. $f(x) = x^2 + 3x - 1$ $[-3,1]$

3. $f(x) = \frac{x^3}{3}$ $[-2,2]$

4. $f(x) = \frac{1}{3}x^3 + \frac{1}{3}x - \frac{4}{3}$ $[-1,2]$

5. $f(x) = \frac{x+3}{x-3}$ $[-1,4]$

6. $f(x) = \frac{x+1}{x-1}$ $\left[\frac{3}{2}, 5\right]$

7. $f(x) = x^{\frac{2}{3}}$ $[0,2]$

8. $f(x) = x^{\frac{2}{3}}$ $[-2,2]$

9. $f(x) = x + \frac{1}{x}$ $\left[-1, \frac{1}{2}\right]$

10. $f(x) = x + \frac{1}{x}$ $\left[\frac{1}{2}, \frac{3}{2}\right]$