

CALCULUS I—Worksheet #16

Determine if the hypotheses of Rolle's Theorem or the Mean Value Theorem are satisfied. If they do, find c . If not, tell why not.

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

2. $f(x)=x^3-x$ on $[0,1]$

3. $f(x)=\frac{x^2-x-6}{x-1}$ on $[-2,3]$

4. $f(x)=\sin x$ on $[0, \pi]$

5. $f(x)=\tan x$ on $[0, \pi]$

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

7. $f(x)=4-x^2$ on $[1,4]$

8. $f(x)=x^2-7x$ on $[1,5]$

9. $f(x)=3x^2-5x+1$ on $[2,5]$

10. $f(x)=x^{3/4}$ on $[0,16]$