

Mean Value Theorem §4.2

1. Consider the function $f(x) = \cos 2x$ with a domain of $[\pi/8, 15\pi/8]$.

(a) Verify the three hypotheses of Rolle's Theorem.

(b) Find all numbers c that satisfy the conclusion of Rolle's Theorem.

2. Exhibit the Mean Value Theorem for $y = x^3 + x - 1$ on the interval $[1, 2]$.