Quiz 8.3 – Rolle's Theorem and the Mean Value Theorem

1. **(1 pt) alfredLibrary/AUCI/chapter8/lesson3/quiz/Rolles1pet.pg**

Consider the function $f(x) = x^2 - 4x$ on the interval $[0,4]$. Verify that this function satisfies the three hypotheses of Rolle's Theorem on the inverval:

$f(x)$ is [?] on $[0,4]$;

$f(x)$ is [?] on $(0,4)$;

and $f(0) = f(4) =$ _____.

Therefore, by Rolle's theorem, there exists a c in $(0,4)$ such that $f'(c) = 0$. Find c.

$c =$ ____

2. **(1 pt) alfredLibrary/AUCI/chapter8/lesson3/MVT22pet.pg**

Find all numbers c that satisfy the conclusion of the Mean Value Theorem for the function $f(x) = x^2 - 2x - 15$ on the interval $[-5,6]$.

If there are multiple values, separate them with commas; enter N if there are no such values.

$c =$ _____