Find the Extrema:

1. [-2,2]
2. [-3,3]

Determine if Rolle’s Theorem applies, if so find the values of *c* such that

1. [0,2]
2. [1,4]

Using the mean value theorem, find all the values of *c* such that:

1. [-1,1]

Using the first derivative test find all intervals and determine if they are increasing or decreasing. Find all critical points and extrema. Label critical points as to whether they are a max, min, or vertical asymptote.

1. [-5,5]
2. Label the intervals and determine whether they are increasing or decreasing:

Circle the appropriate answers:

**Interval A:** increasing decreasing

**Interval B**: increasing decreasing

**Interval C:** increasing decreasing



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 **int A int B int C**

1. Explain the difference between Rolle’s Theorem and the Mean Value Theorem. How do you decide when which applies? What is the difference between the *f ’(c)* over the interval (a,b) that you find using the two theorems? What can you tell me about the secant and tangent used in these theorems?