

5.5 Determine Absolute Extrema from Candidates

Calculus

Name: _____

CA #2

Find the absolute maximum value and the absolute minimum value of the function on the given interval.
Remember to show that you checked ALL the candidates.

1. $f(x) = x^3 - 27x + 2, \quad [0, 4]$

2. $h(x) = 3x^{\frac{2}{3}} - 2x, \quad [-1, 1]$

3. $g(x) = x^2 + \frac{2}{x}, \quad \left[\frac{1}{2}, 2\right]$

4. $f(x) = \sin 3x, \quad \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$

Answers to 5.5 CA #2

<p>1. $f(-3)$ not used $f(0) = 2$ $f(3) = -52$ $f(4) = -42$ Min value: -52 Max value: 2</p>	<p>2. $f(-1) = 5$ $f(0) = 0$ $f(1) = 1$ Min value: 0 Max value: 5</p>	<p>3. $g\left(\frac{2}{3}\right) = 4.25$ $g(1) = 3$ $g(2) = 5$ Min value: 3 Max value: 5</p>	<p>4. $f\left(-\frac{\pi}{2}\right) = 1$ $f\left(-\frac{\pi}{6}\right) = -1$ $f\left(\frac{\pi}{6}\right) = 1$ $f\left(\frac{\pi}{2}\right) = -1$ Min value: -1 Max value: 1</p>
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