

University of Bahrain  
Department of Mathematics  
MATHS101: Calculus I  
Dr. Abdulla Eid



## Worksheet: Critical Numbers

Students' Name: \_\_\_\_\_

1. What is the definition of a *decreasing* function? Write both geometric and algebraic one.

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2. What is the definition of a *global minimum*?

3. What is the definition of a *local minimum*?

4. Find the critical numbers of the following function

1.  $f(x) = 3x^4 - 4x^3 - 12x^2 + 5$

2.  $f(x) = \frac{x}{2} - \sin x$

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3.  $f(x) = \sqrt[3]{4 - x^2}$

4.  $f(x) = \frac{x - 1}{x^2 - 4}$

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