

King Fahd University of Petroleum & Minerals  
Department of Mathematics and Statistics  
(Semester 151) Math 101 Quiz # 5

Name: \_\_\_\_\_ I.D. # \_\_\_\_\_ Sr. # \_\_\_\_\_

Consider the function  $f(x) = \frac{x^2 - 4x + 4}{x^2}$ ,

1. Discuss the symmetry of the function.
2. Find all asymptotes.
3. Find the relative extrema, if any exist, and where  $f$  is increasing or decreasing.
4. Find inflection points, if any exist, and where  $f$  is concave up or down.
5. Sketch the graph of  $f(x)$  clearly indicating all important points and concavity.

