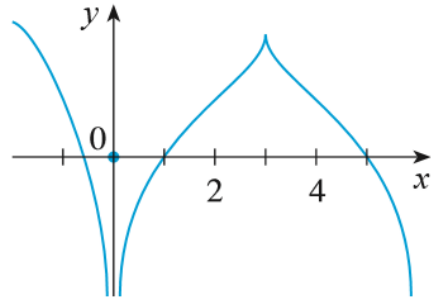
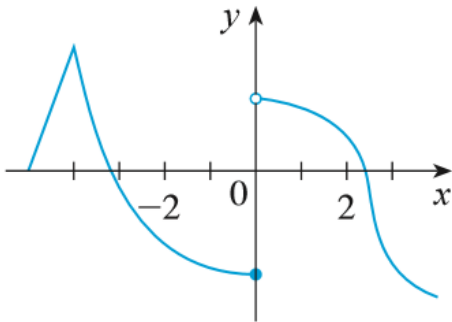


King Fahd University of Petroleum & Minerals  
 Department of Mathematics and Statistics  
 (Semester 171) Math 101-50 Quiz # 2

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

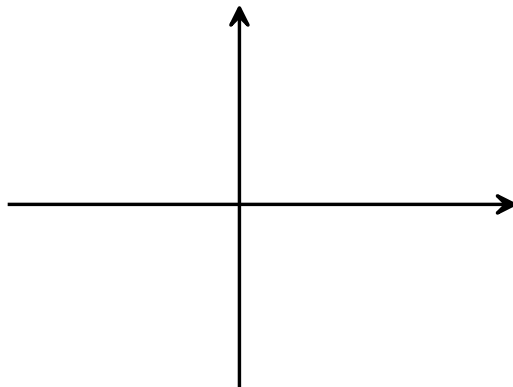
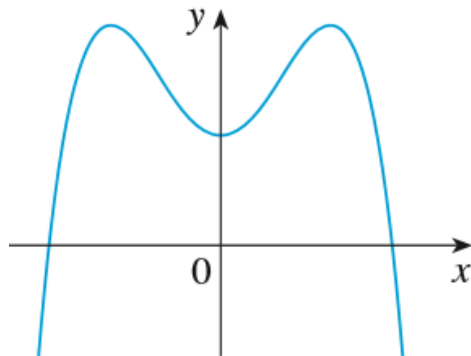
1. State with reasons all numbers at which the functions shown are not differentiable.



x	Reason

x	Reason

2. Sketch the derivative of the function shown below.

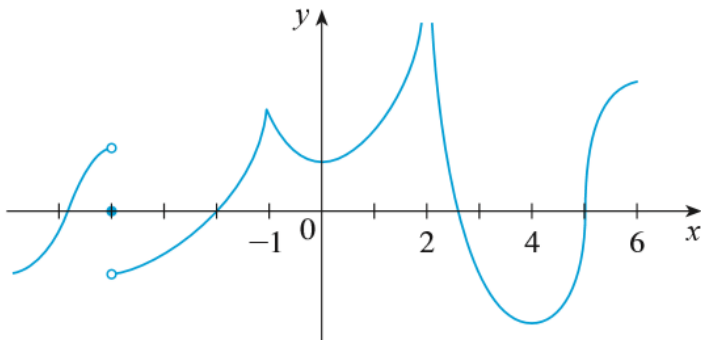


3. **Using DEFINITION**, find the derivative of  $f(x) = \sqrt{x+1}$  at any possible  $x$ . Evaluate, then, the derivative at  $x = 3$ . Find the equation of the NORMAL line to the graph at  $x = 3$ .

King Fahd University of Petroleum & Minerals  
 Department of Mathematics and Statistics  
 (Semester 171) Math 101-48 Quiz # 2

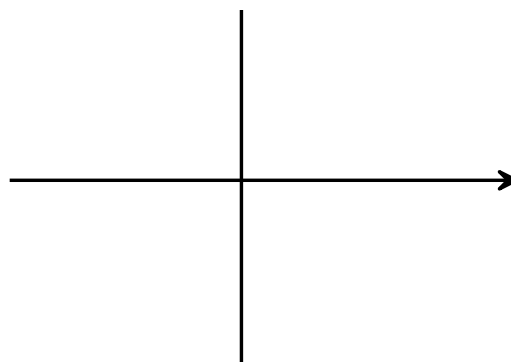
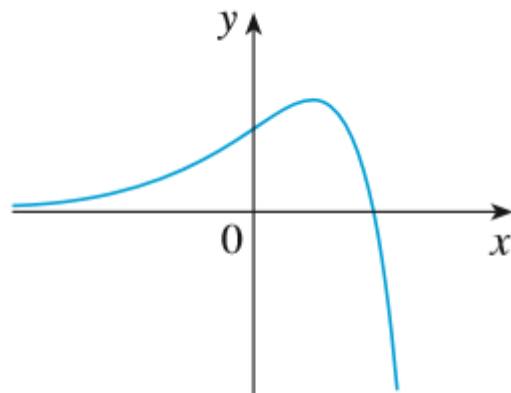
Name: \_\_\_\_\_ I.D. # \_\_\_\_\_ Sr. # \_\_\_\_\_

1. State with reasons all numbers at which the function shown is not differentiable.



$x$	Reason

2. Sketch the derivative of the function shown below.



3. **Using DEFINITION**, find the derivative of  $f(x) = \sqrt{2-x}$  at any possible  $x$ . Evaluate, then, the derivative at  $x = -2$ . Find the equation of the NORMAL line to the graph at  $x = -2$ .