AP Calculus-AB Limits, Continuity, & R.O.C Day 10

Notes: Derivative as a Function

Example(s) 1:

For the function given, arrange the following numbers from least to greatest.

1. Sketch a graph of the derivative on top of .



|  |  |
| --- | --- |
| What do you know about ? | What does it tell you about ? |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Example(s) 2:

Sketch the graph of given the graph of f(x).

|  |  |
| --- | --- |
|  |  |
|  |  |

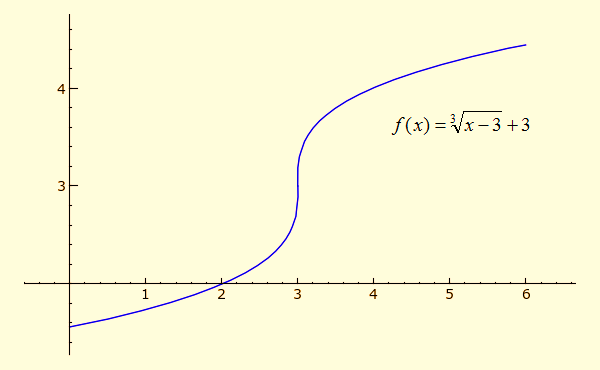
Differentiability:

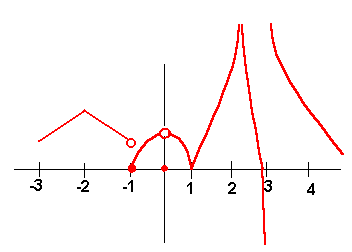
We say that a function is differentiable at a point if a derivative is defined at the point. A function  will fail to be differentiable at  if

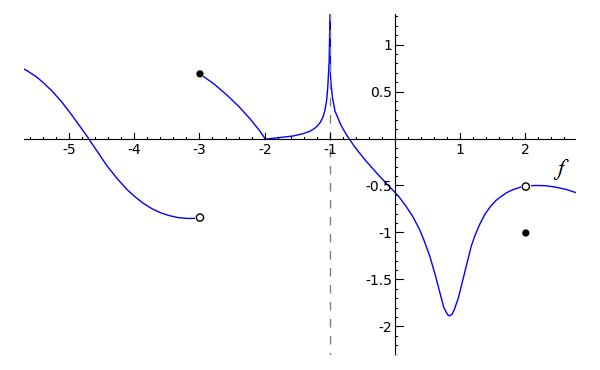
*  is discontinuous at ,
*  has a cusp or corner at , or
*  has a vertical tangent at 

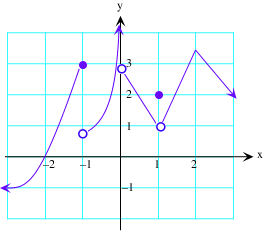
Example(s) 3:

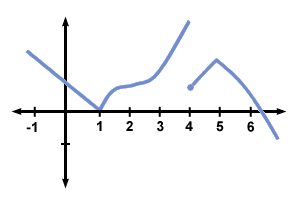
State where each function is not differentiable and why.

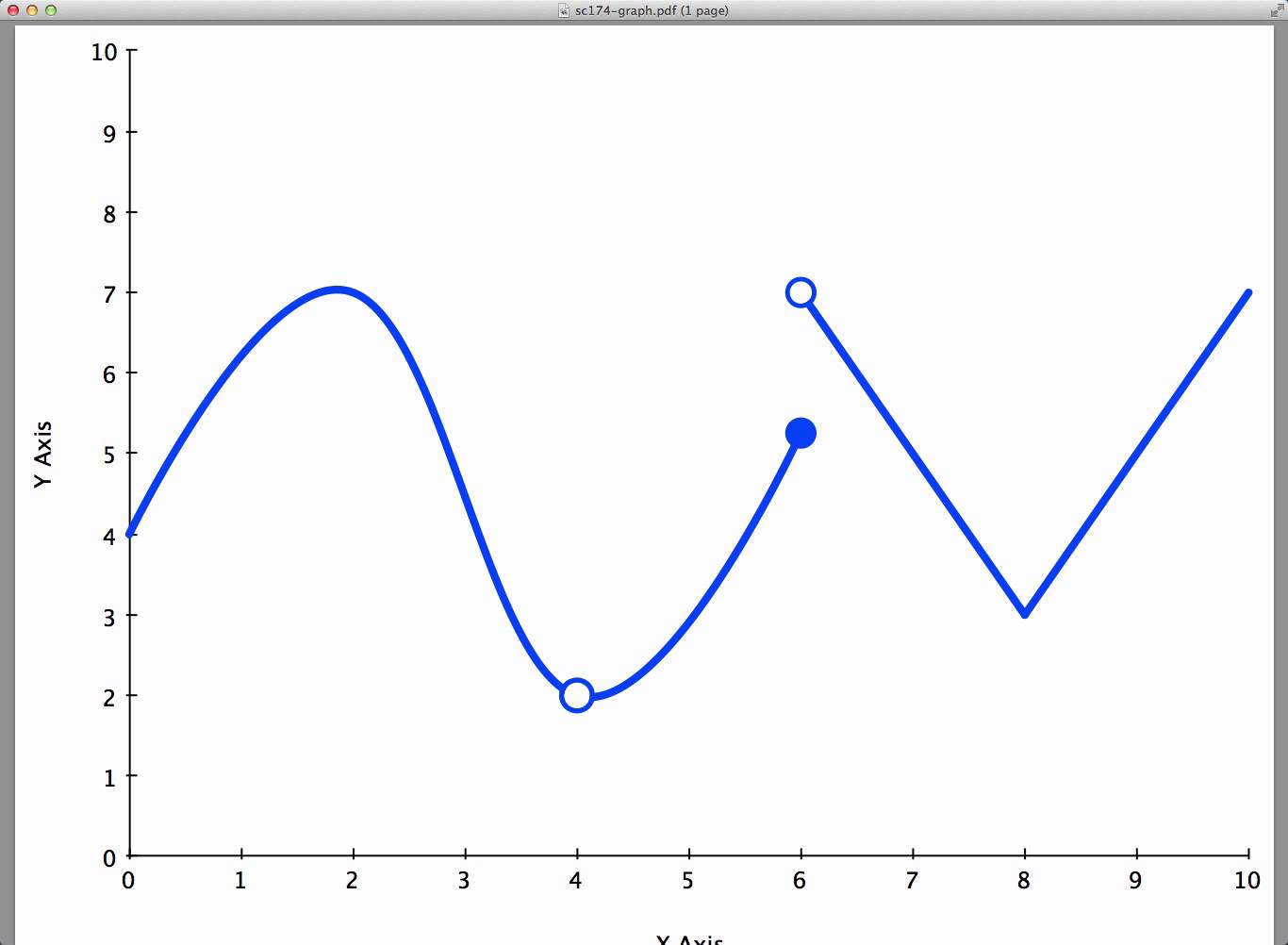
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