

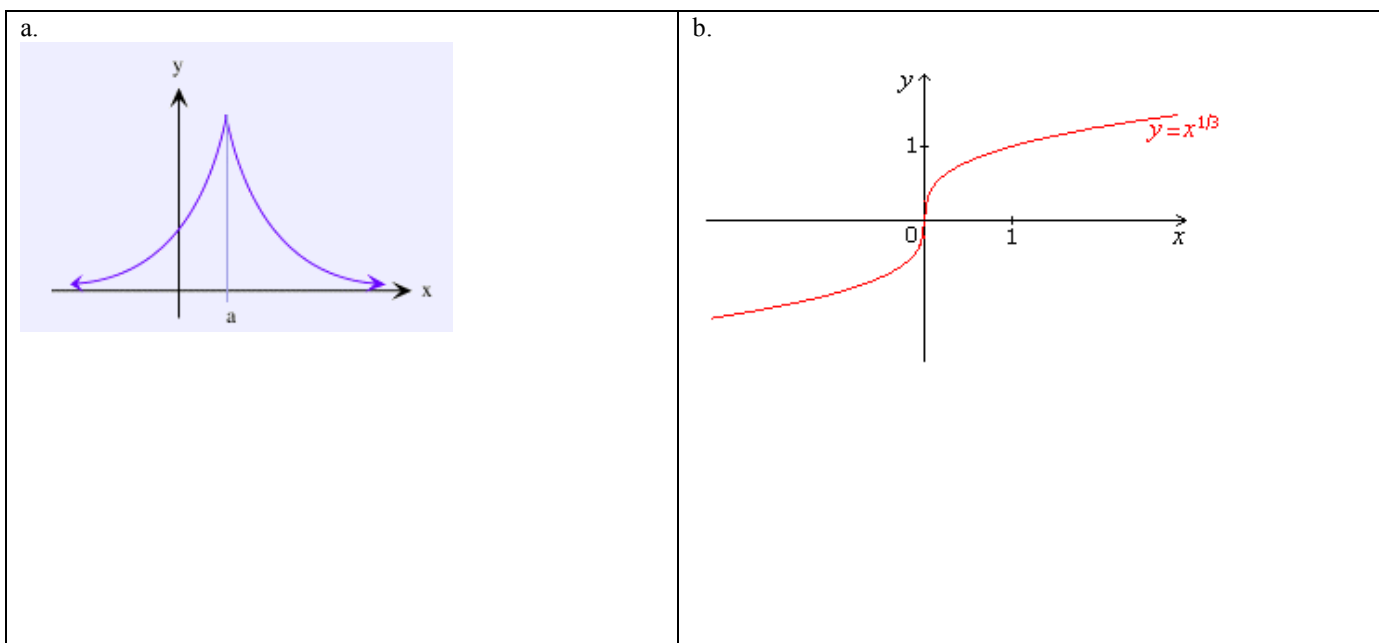
Checkup3A

Name: _____

- Explain and use both forms of the definition
- Find derivatives at a point
- Find derivatives of functions
- Explain points of non-differentiability
- Understand instantaneous rates of change

1. Use both forms of the definition to find the derivative of $f(x) = \frac{1}{x}$

2. For each of the graphs below, explain the points of non-differentiability
(An explanation is more than simply identifying where the points are located. Tell me why)



2. Using the function $f(x)$ from problem 1, explain the meaning of $f'(x)$ for any x in the domain of f .

3. Using the function $f(x)$ from problem 1, explain the meaning of $\frac{f(a) - f(b)}{a - b}$ for any two values a and b in the domain of f .

4. Does differentiability imply continuity or is it the other way around?