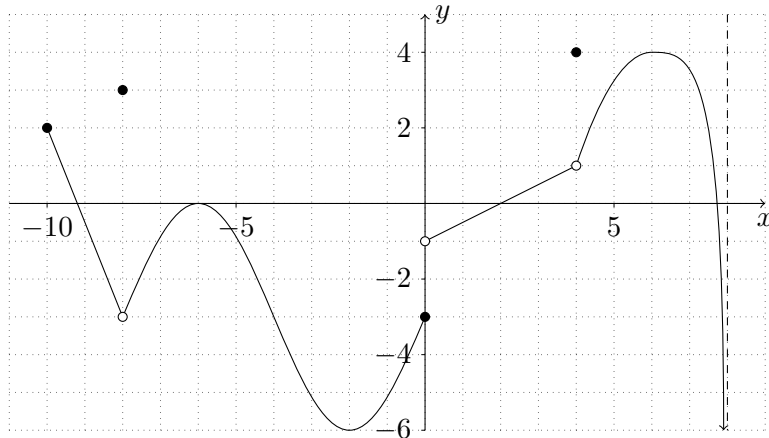


Quiz 3

Show all your work

Name: _____
 Number: _____
 Signature: _____
 Score: ____/10

Problem 1: Shown is the graph of $y = f(x)$. Answer the following questions.



- | | |
|---|---|
| <p>a. $f'(1) =$ <input style="width: 100px; height: 30px;" type="text"/></p> | <p><input style="width: 100px; height: 30px;" type="text"/></p> |
| <p>b. $\lim_{x \rightarrow 2.8182} \frac{f(x) - f(2.8182)}{x - 2.8182} =$ <input style="width: 100px; height: 30px;" type="text"/></p> | <p>e. $\lim_{x \rightarrow 0} \frac{f(x) - f(0)}{x} =$ <input style="width: 100px; height: 30px;" type="text"/></p> |
| <p>c. $\lim_{x \rightarrow 6} \frac{f(x) - f(6)}{x - 6} =$ <input style="width: 100px; height: 30px;" type="text"/></p> | <p>f. State all value(s) of x in the domain where f is discontinuous.
 <input style="width: 100px; height: 30px;" type="text"/></p> |
| <p>d. $\lim_{h \rightarrow 0^-} \frac{f(-8 + h) - f(-8)}{h} =$ <input style="width: 100px; height: 30px;" type="text"/></p> | <p style="text-align: right;">Score: /6</p> |

Problem 2: Find the derivatives of the following functions.

a. $f(x) = (x^2 + 3)(5 - x^5)$

b. $g(x) = \frac{\pi x^3 - 4}{7x + 1}$