**MATH 205 – Calculus I** **SQ 3.2**

Name: _____ Date: _____

**To receive any credit for the following problems, you must show complete and accurate work. Use proper limit notation and give exact answers unless otherwise noted.**

1. Use the limit of the difference quotient to determine $f'(x)$ given $f(x) = \frac{2}{x-5}$

2. An equation of the tangent line to the graph of $f$ at $x$ = -1 is $y = 7x + 9$. Find $f(-1)$ and $f'(-1)$.

3. Given the graph of $f(x)$ below, sketch $f'(x)$ on the same coordinate plane