Name: —————————————————————

ID #: —————————————————————

Quiz 1

1. Compute

$$\lim_{x \to \infty} \frac{3x^2 + 5}{2x^2 + 1}.$$

2. Compute the derivative of

$$f(x) = \frac{\sin(3x)}{x}.$$

3. Compute

$$\int_0^3 x^2 - 1 + \cos(2\pi x)\, \mathrm{d}x.$$

You should simplify your final answer as much as possible.