Derivative as a Function Practice

Compute the derivative of the following functions. Show all your work.

1. Find the derivative of
$$f(x) = 3x^2 - 1.$$

2. Find the derivative of
$$g(x) = x^3.$$

3. Find the derivative of
$$\ell(x) = 5\sqrt{x}.$$

4. Find the derivative of
$$k(x) = \frac{3}{x-2}.$$