No books or notes allowed. No laptop, graphic calculator or wireless devices allowed. Write clearly.

Name: _____

1. (10 points) Let $f(x) = 3x^2 + 1$. Find an antiderivative of f. Use it to compute:

$$\int_0^1 (3x^2 + 1)dx$$

Solution:

An antiderivative is:

$$F(x) = x^3 + x$$

so that we have

$$\int_0^1 (3x^2 + 1)dx = (x^3 + x)\Big|_0^1 = 2.$$