Evaluating Definite Integrals More Practice **Name:**

AP Calculus

Evaluate each definite integral below. Remember: If you use u-substitution, find the new limits of integration.

1) $\int_{0}^{2} 2x^2\sqrt{x^3+1}\,dx$

2) $\int_{-1}^{1} x(x^2+1)^3\,dx$

3) $\int_{0}^{2} x\sqrt[3]{4+x^2}\,dx$

4) $\int_1^5 \frac{x}{\sqrt{2x-1}}\,dx$

5) $\int_0^4 \sqrt{x}\,dx = \int_0^k y^2\,dy$

Find the exact value of k that solves the equation (the answer will have a radical symbol in it)

6) Say in words what the main difference between a definite integral and an indefinite integral is.