

SUBSTITUTION

BLAKE FARMAN

Lafayette College

Name: _____

Use substitution and the Fundamental Theorem of Calculus to evaluate the following integrals.

1. $\int_0^1 \cos(\pi t/2) dt$

2. $\int_0^1 (2t - 1)^{50} dt$

3. $\int_0^{\pi/6} \frac{\sin(t)}{\cos^2(t)} dt$

4. $\int_0^3 x\sqrt{9-x^2} dx$

5. $\int_0^{\pi/2} \cos(x) \sin(\sin(x)) \, dx$

6. $\int_{-\pi/3}^{\pi/3} x^4 \sin(x) \, dx$