Name _____ Date_____ Score _____

Math 2413 Homework 4.5 Integration by Substitution, page 1

Find the indefinite integral by substitution. Identify the u and du in each case.

$$\int x\sqrt{x^2+1}\,dx$$

u = _____

du = _____

$$\int x^2\sqrt{x+1}\,dx$$

u = _____

du = _____

Math 2413 Homework 4.4 Integration by Substitution, page 1, page 2

Find the integral by substitution. Identify the u and du in each case.

$$\int tan^3 x \, sec^2 x \, dx$$

u = _____

du = _____

$$\int_{\frac{\pi}{6}}^{\pi} \frac{\cos x}{sin^3 x} \, dx$$

u = _____

du = _____