

Math 110-004: Calculus I

Lab Test # 6, Dec 7, 1999.



Name: \_\_\_\_\_

Student number: \_\_\_\_\_

Find the integrals by making the indicated substitution. (You should get the same answer in both cases.)

a -  $\int \frac{\sin(x)}{\cos^3(x)} dx$  by putting  $u = \cos(x)$ .

$$\frac{\sin(x)}{\cos^3(x)} = \frac{-du}{u^3}$$

$$= \frac{1}{2} \sec^2 x$$

b -  $\int \tan(x) \sec^2(x) dx$  by putting  $u = \tan(x)$ .