NAME _____ JULY 30, 2018

Instructions: *Include all relevant work to get full credit. Write your solutions using proper notations. Encircle your final answers.*

Quiz #16

1. Use the substitution method to find the general antiderivative of the following: (*Make sure that your final answer is in terms of the original variable.*)

a. $\int xe^{x^2+1}\,dx$ [2]

b. $\int 4x\sqrt[3]{x^2-3}\,dx$ [2]

c. $\int \dfrac{3t^2-1}{t^3-t}\,dt$ [2]

d. $\int \dfrac{\sec^2\theta}{\tan^2\theta}\,d\theta$ [2]

e. $\int 4x^3\sqrt[3]{x^2-3}\,dx$ [2]