

Recitation #1 - Review of Substitution

Warm up:

Find the error in the following “solution”:

Find $\int_{-2}^2 \frac{1}{x^8 - 1} dx$

Group work:

Problem 1 Compute the following integrals:

(a) $\int 2t \sin(t^2) dt$

(b) $\int \sec^2(x) \tan(x) dx$

Problem 2 Compute the following integrals:

(a) $\int \frac{x^2}{1+x^2} dx$

Figure1.pdf

(b) $\int \frac{1+3x}{4+4x^2} dx$

Problem 3 Evaluate the following integrals:

(a) $\int \frac{13x^7}{\sqrt{3x^4 - 5}} dx$

(b) $\int \frac{x^3}{x^2 - 3} dx$