

Present neatly. Justify for full credit. ~~No Calculators.~~

Name _____ Score _____ 15 minutes

1) Use the limit definition of a definite integral to evaluate

$$\int_{-1}^1 x^3 - x^2 + x + 1 \, dx$$

(9 points)

2) Explain, to a non-mathematical person, the difference between a definite and an indefinite integral. (1 point)

3) Find the indefinite integral. (5 points)

a)

$$\int \frac{x^2 dx}{1+x^6}$$

b)

$$\int [\csc(\sin x)]^2 \cos x \, dx$$
