

Homework - integrals- MAC 2311, Summer B 2019 NAME: _____

Due Monday, July 22. No exceptions.

1. (2 pts) Solve the initial value problem:

$$\frac{dy}{dx} = \frac{1}{2x} + x^2 + 1, \quad y(1) = \frac{1}{3}$$

2. Compute (3 pts each)

(a) $\int \frac{x}{x^2 + 9} dx$

(b) $\int \frac{\sec^2(\sqrt{x})}{\sqrt{x}} dx$

(c) $\int \frac{\cos \theta}{\sin^2 \theta + 4} d\theta$