

Please show your procedure

NO PROCEDURE = NO POINTS

1. Evaluate the following integrals.

(2.5 points each)

(a)
$$\int_{1/2}^{\sqrt{3}/2} \frac{6}{\sqrt{1-t^2}} dt$$

(b)
$$\int_1^{64} \frac{1 + \sqrt[3]{x}}{\sqrt{x}} dx$$

(c)
$$\int_0^{\pi/4} \frac{1 + \cos^2 \theta}{\cos^2 \theta} d\theta$$

(d)
$$\int_1^e \frac{x^2 + x + 1}{x} dx$$

2. Evaluate the following indefinite integrals

(2.5 points each)

(a) $\int x^2 e^{x^3} dx$ Let $u =$

(b) $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} dx$ Let $u =$

(c) $\int \frac{e^x}{e^x + 1} dx$ Let $u =$

(d) $\int e^{2x} \sqrt{e^{2x} + 5} dx$ Let $u =$