

§5.4 (PART 1): INDEFINITE INTEGRALS AND u -SUBSTITUTION

1.] Compute the following indefinite integrals:

$$a.) \int (3x^5 + 5x^{-2/3}) dx$$

$$b.) \int \frac{1}{x} + \cos(x) dx$$

$$c.) \int \frac{2}{3(1+x^2)} dx$$

2.] Compute the following anti-derivative: $\int 2 \cos(2x) dx$

3.] Compute the following anti-derivative: $\int 2x(x^2 + 1)^{10} dx$

4.] Compute the following indefinite integral: $\int \sin^3(x) \cos(x) dx$

5.] Compute the following indefinite integral: $\int e^{5x} dx$

6.] Compute the following indefinite integral: $\int \frac{dx}{1+4x^2}$

7.] Compute the following anti-derivative: $\int \frac{x}{\sqrt{x-4}} dx$

8.] Compute the following indefinite integral: $\int x \sqrt[3]{2x+1} dx$