

Exercise #1(30pts): Evaluate the integral

$$I_1 = \int \cos^3 x \sin^2 x dx$$

Exercise #2(30pts): Evaluate the integral

$$I_2 = \int x^3 \sqrt{4 - x^2} dx$$

Exercise #3: (40pts) Evaluate the integral

$$I_3 = \int \frac{1}{3 - 5 \sin x} dx$$