4: (6 pts) Write an integration problem (of your choice) for which the substitution $w = 1/x$ would be the best way to start. You need not evaluate your own integral.

Your integral: _____

5: (10 pts) Does $\int_0^8 \frac{5+\sin(x)}{x(8+\cos(x))}dx$ converge or diverge? Demonstrate unequivocally that your answer is correct.