Problem 1. Suppose that we have a function $f(x)$ whose values are given by the following table.

x	0.0	0.2	0.4	0.6	0.8	1.0
$f(x)$	1.0	0.9	0.7	0.9	1.0	1.2

Use Simpson's Rule to approximate the value of $\int_0^{0.8} f(x)dx$ with $n = 2$.

Problem 2. Determine the value of the integral if it exists or else write DIVERGENT.

$$\int_0^1 \frac{1}{\sqrt{x}} dx$$