1. (2 pts each) Circle true or false. No explanation necessary.

True or **False**: If f is a continuous function, then $\int_0^9 f(x)dx$ is between LEFT(17) and RIGHT(17).

True or **False**: The sum $1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \ldots$ diverges.

True or **False**: Applying separation of variables to a differential equation is always more accurate than using Euler's method.

True or **False**: Let $p(x)$ be a probability density function. Then for all x, $0 \leq p(x) \leq 1$.

True or **False**: If a metal rod has variable density $\rho(x)$ kilograms per meter, then its mass is the product of its length and the integral of $\rho(x)$.