DATE: _____

Practice for Mini-Test

1. Approximate the definite integral using left Reimann sum, right Reimann sum, and midpoint Reimann sum with 4 equal subintervals.

$$\int_0^2 x\sqrt{3-x}\,dx$$

2. Approximate $\int_0^8 f(x)dx$ using a right Reimann sum of four subintervals.

Is this an overapproximation? Explain.

x	0	1	3	7	8
$f(x)$	0	4	18	70	88

3. Sketch the region whose area is given by the definite integral. Then evaluate the integral.

a) $\int_0^3 4\,dx$ **b)** $\int_{-a}^{a} 4\,dx$ **c)** $\int_0^3 \sqrt{9-x^2}\,dx$

4. If $\int_2^4 x^3\,dx = 60$, $\int_2^4 x\,dx = 6$, and $\int_2^4 dx = 2$, then evaluate the integrals.

a) $\int_4^2 x\,dx$ **b)** $\int_2^4 4x\,dx$ **c)** $\int_2^4 \left(x^3+4x\right)dx$