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## Quiz 1 MATH 102-06 T101

Serial # \_\_\_\_\_

1. Estimate the area under the curve  $f(x) = 5 - x^2$  from  $x = -3$  to  $x = 3$  by using Three Rectangles and the Mid-Point Rule.

3. Evaluate the integral  $\int_{-2}^0 (1 + \sqrt{4 - x^2}) dx$  by interpreting it in terms of areas.

2. Express the following limit as a definite integral (Show full work)

$$\lim_{n \rightarrow \infty} \sum_{i=1}^n \left[ 1 + \left( \frac{2i}{n} \right)^2 \right] \frac{3}{n}$$

ID# \_\_\_\_\_

**\*Quiz 1 MATH 102-10 T101**

Serial # \_\_\_\_\_

1. Estimate the area under the curve  $f(x) = x^2 - 2$  from  $x = -3$  to  $x = 3$  by using Three Rectangles and the Mid-Point Rule.

3. Evaluate the integral  $\int_{-3}^3 (3 - \sqrt{9 - x^2}) dx$  by interpreting it in terms of areas.

2. Express the following limit as a definite integral (Show full work)

$$\lim_{n \rightarrow \infty} \sum_{i=1}^n \left[ 2 + \left( \frac{3i}{n} \right)^2 \right] \frac{2}{n}$$