

Math 152 Quiz #1
January 12, 2009

Name: _____

Show all work.

1. (3 pts.) Find $f(x)$ if $f'(x) = 6x^2 + 3e^x$ and $f(0) = 5$.

2. (2 pts.) Write the sum $\sum_{i=1}^{25} 3\sqrt{i}$ in expanded form. (Do not evaluate the sum.)

3. (3 pts.) Given the table below, approximate the area between $g(x)$ and the x -axis for $0 \leq x \leq 8$ by using four **left**-end rectangles.

x	0	2	4	6	8
$g(x)$	2	1	3	4	5

4. (2 pts.) Express the area under the curve $h(x) = 2 + \sin x$ from $x = 1$ to $x = 4$ as the limit of a sum of approximating **right**-end rectangles. (Do not evaluate.)

Note: $A = \lim_{n \rightarrow \infty} \sum_{i=1}^n \Delta x \cdot f(x_i)$ where $\Delta x = \frac{b-a}{n}$ and $x_i = a + i\Delta x$