Quiz 2 Calculus 1 Due 11/19/2015

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. If you use a left-hand sum with $n = 4$ subdivisions to approximate $\int_1^5 \frac{1}{x}\,dx$, what are:

$\Delta x =$

$c_1 =$

$c_2 =$

$c_3 =$

$c_4 =$

$f(c_1) =$

$f(c_2) =$

$f(c_3) =$

$f(c_4) =$

$\sum_{i=1}^{4} f(c_i)\cdot\Delta x =$

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2. If you use a right-hand sum with $n = 4$ subdivisions to approximate $\int_1^3 x^2\,dx$, what are:

$\Delta x =$

$c_1 =$

$c_2 =$

$c_3 =$

$c_4 =$

$f(c_1) =$

$f(c_2) =$

$f(c_3) =$

$f(c_4) =$

$\sum_{i=1}^{4} f(c_i) \cdot \Delta x =$

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3. If you use a midpoint sum with $n = 8$ subdivisions to approximate $\int_1^5 \frac{1}{x}\,dx$, what are:

$\Delta x =$

$c_1 =$

$c_2 =$

$c_3 =$

$c_4 =$

$c_5 =$

$c_6 =$

$c_7 =$

$c_8 =$

$f(c_1) =$

$f(c_2) =$

$f(c_3) =$

$f(c_4) =$

$f(c_5) =$

$f(c_6) =$

$f(c_7) =$

$f(c_8) =$

$\sum_{i=1}^{8} f(c_i)\cdot\Delta x =$

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4. If you use a right-hand sum with n subdivisions to approximate $\int_1^3 x^2\,dx$, what are:

$\Delta x =$

$c_k =$

$f(c_k) =$

$\sum_{k=1}^{n} f(c_k) \cdot \Delta x =$

$\lim_{n\to\infty} \sum_{k=1}^{n} f(c_k) \cdot \Delta x =$