Review 4.2 4.6 Formulas and Definitions:

Summation Formulas:

1) $\displaystyle\sum_{i=1}^{n} 1 =$ $\qquad$ $\displaystyle\sum_{i=1}^{n} 1 = n$

2) $\displaystyle\sum_{i=1}^{n} i =$ $\qquad$ $\displaystyle\sum_{i=1}^{n} i = \frac{n(n+1)}{2}$

3) $\displaystyle\sum_{i=1}^{n} i^2 =$ $\qquad$ $\displaystyle\sum_{i=1}^{n} i^2 = \frac{n(n+1)(2n+1)}{6}$

4) $\displaystyle\sum_{i=1}^{n} i^3 =$ $\qquad$ $\displaystyle\sum_{i=1}^{n} i^3 = \frac{n^2(n+1)^2}{4}$

5) Area of Trapezoid: _____ $\qquad$ $Area = \dfrac{w}{2}(h_1 + h_2)$

6) Width formula: _____ $\qquad$ $width = \dfrac{b-a}{n}$

7) Limit Definition of Area under Curve $\qquad$ $\displaystyle\lim_{n \to \infty} \sum_{i=1}^{n} (width) * f(a + width * i)$