

Calculus Notation

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1 Given Equation:

$$g(x) = (\sqrt{x} + 1) + (\sqrt{x} + 2) = 2\sqrt{x} + 3$$

Here Domain is $D_f = [-\infty, \infty)$

Range $R_f = (\frac{1}{2})$

2 Differentiation

$$\lim_{x \rightarrow \infty^+} (x + \frac{1}{x})^2$$
$$\int_a^b f(x) dx$$

3 Intregation

$$\int \frac{x^2-1}{(x^2+1)(\sqrt{x^6+1})} dx = -x - \frac{x^2}{2} + \frac{x^3}{3}$$

4 Tripple intregation:

$$\int_a^b \int_c^d \int_e^f f(x) dx$$

5 Summiation

$$\sum_{n=0}^{n=\infty} (a + b)$$

6 vector Form:

$$\vec{r} = 4\vec{i} + 5\vec{j} + 6\vec{k}$$

7 Current rectification

$$\alpha = \frac{\beta}{1+\beta}$$