Formula Page

This page of formulas will be available to you during the exam.

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

$$L_n = \sum_{i=0}^{n-1} f\left(a + (i-1)\frac{b-a}{n}\right)\Delta x$$

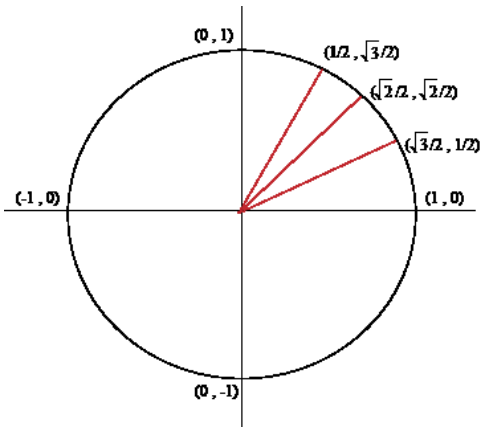
$$R_n = \sum_{i=1}^{n} f\left(a + i\frac{b-a}{n}\right)\Delta x$$

$$\int_a^b f(x)\,dx = \lim_{n\to\infty} \sum_{i=1}^{n} f(x_i^*)\Delta x$$

$$\frac{d}{dx}\int_a^x f(t)\,dt = f(x)$$

$$\int_a^b F'(x)\,dx = F(x)\Big|_a^b = F(b) - F(a)$$

$$f_{avg} = f(c) = \frac{1}{b-a}\int_a^b f(x)\,dx$$



$$\int x^n\,dx = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1$$

$$\int \frac{1}{x}\,dx = \ln|x| + C,$$

$$\int \sin x\,dx = -\cos x + C$$

$$\int \cos x\,dx = \sin x + C,$$

$$\int \sec^2 x\,dx = \tan x + C$$

$$\int e^x\,dx = e^x + C,$$

$$\int \ln(x)\,dx = x\ln(x) - x + C$$

$$\int \frac{1}{1+x^2}\,dx = \arctan x + C$$