

Assignment

In each of the following try to use a numerical analytical technique to find the solution. You can use a computer or a non-programmable calculator. Do not use the integrator of the calculator. Write down the computations for each iteration.

1. Find a polynomial passing through $(1, 2)$, $(-1, -6)$, $(2, 6)$ and $(0, -2)$.
2. Find a solution of the equation $\sin(x) + x = 1$. Here x is measured in radians.
3. Find the area of a triangle whose sides are given by the equations :

$$3x + 2y = 1$$

$$x = 4$$

$$y = 2$$

4. Find the integral :

$$\int_1^{100} \sqrt{\frac{1}{x^3}}$$