

1. The first part of the paper is devoted to the study of the properties of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt, \quad (1)$$

where x is a real number. It is shown that the function $f(x)$ is increasing and concave down on the interval $(-\infty, \infty)$.

2. In the second part of the paper, we consider the function $F(x)$ defined by the equation

$$F(x) = \int_0^x \frac{1}{1+t^2} dt, \quad (2)$$

where x is a real number. It is shown that the function $F(x)$ is increasing and concave down on the interval $(-\infty, \infty)$.

3. In the third part of the paper, we consider the function $G(x)$ defined by the equation

$$G(x) = \int_0^x \frac{1}{1+t^2} dt, \quad (3)$$

where x is a real number. It is shown that the function $G(x)$ is increasing and concave down on the interval $(-\infty, \infty)$.