Mathematics in Economics

TASK 2 – 5 points

Name: ……

1) Find Taylor series of $f(x) = 4x^3 + 2x^2 - 5x + 1$ at the point $a = 2$.

2) Find Maclaurin series of $f(x) = 4x^3 + 2x^2 - 5x + 1$ at the point $a = 0$.

3) Find the increment (find differential) of the function $f(x) = 3x - 2x^2$ for $x = 1$, $dx = 0.1$

(x represents the price of product, y represents the number of products sold). If we increase the price from 1 to 1.1, then the number of products sold will ***increase*** or ***decrease***? ***And by how many pieces?***

Mathematics in Economics

TASK 2 – 5 points

Name: ……

1) Find Taylor series of $f(x) = 2x^3 + 3x^2 - 2x + 1$ at the point $a = 1$.

2) Find Maclaurin series of $f(x) = 2x^3 + 3x^2 - 2x + 1$ at the point $a = 0$.

3) Find the increment (find differential) of the function $f(x) = 2x - 3x^2$ for $x = 1$, $dx = 0.2$

(x represents the price of product, y represents the number of products sold). If we increase the price from 1 to 1.2, then the number of products sold will ***increase*** or ***decrease***? ***And by how many pieces?***

Mathematics in Economics

TASK 2 – 5 points

Name: ……

1) Find Taylor series of $f(x) = 3x^3 - 4x^2 + 2x - 3$ at the point a = -1.

2) Find Maclaurin series of $f(x) = 3x^3 - 4x^2 + 2x - 3$ at the point a = 0.

3) Find the increment (find differential) of the function $f(x) = x + 2x^2$ for x = 1, dx = 0.3

(x represents the price of product, y represents the number of products sold). If we increase the price from 1 to 1.3, then the number of products sold will ***increase*** or ***decrease***? ***And by how many pieces?***