**Mathematics in Economics**

**TASK 2 – 5 points**

Name: …………………………………

1. Find Taylor series of $ f\left(x\right)=4x^{3}+2x^{2}-5x+1$ at the point *a* = 2.
2. Find Maclaurin series of $ f\left(x\right)=4x^{3}+2x^{2}-5x+1$ at the point *a* = 0.

3) Find the increment (find differential) of the function $f\left(x\right)=3x-2x^{2}$ 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\left(x\right)=2x^{3}+3x^{2}-2x+1$ at the point *a* = 1.
2. Find Maclaurin series of $ f\left(x\right)=2x^{3}+3x^{2}-2x+1 $at the point *a* = 0.

3) Find the increment (find differential) of the function $f\left(x\right)=2x-3x^{2}$ 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\left(x\right)=3x^{3}-4x^{2}+2x-3$ at the point *a* = -1.
2. Find Maclaurin series of$ f\left(x\right)=3x^{3}-4x^{2}+2x-3$ at the point *a* = 0.

3) Find the increment (find differential) of the function $f\left(x\right)=x+2x^{2}$ 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?***