## **https://lh3.googleusercontent.com/ghI8e8xowVhFeko_KT-4KwYk9f4wVZ3Pr_lOGfM_vIWO0CcuMzWYFi_Fv5hRUtjKa8SrMJWSFeIpnVnpGA9E5Nf0GR0muJJngTOGaqUw-71o_GuAvorkT0JjwEJV0ZlW0CVWNl2c**

**MST129: Applied Calculus**

**===========================**

**Nancy Al Aswad -2180385**

**Arab Open University**

**Jordan**

**01/12/2021**

# Answer for Question (1):

**===============**

**First step**: I solve the composition equation by using the rule as follow

=

**Second step**: I solve the domain of

2.) The

So the and the

So finally the

# Answer for Question (2):

**===============**

**============**

1. ***.***

**=========**

# Answer:

**=====**

*so the equation became*

# Answer for Question (3):

**===============**

# Answer for Question (4):

**===============**

**After get the (2) from all sides I got: -**

**Now make uniform for the denominator**

**And finally for working in the horizontal tangent line I use the formula**

=

**Multiply them**

**The result we got are :**

**Make aggregation to simplify the result as much as we can with below steps**

# Answer for Question (5):

**===============**

**so ,**

**And**

So the Intervals are:

==================

1. () where is increasing.
2. where is decreasing.

and **minimum** not founded

# Answer for Question (6):

**===============**

I will represent the **(large volume)** with **(L) ,** And as I got square sheet of cardboard with each side I will use the below

**Now**

# Answer for Question (7):

**==============**

and simplify the result as in the below steps:

**------------🡪**

*Now we know that* So we compensate it as ;

# Answer for Question (8):

**==============**

From the Question the function below;

Now

which indicate that the **equation** of the line tangent to the graph of at  is :