Week 3 Assignment 3

1. Derive the expression for the difference in the output when the input changes from $a$ to $b$.

2. In the formula for the difference, $y_{out}$ is the output after the input has been changed. How does this formula work for predicting the change in the output?

3. If the input is $x$ and the output is $y$, what is the change in the output when the input changes by $h$?

4. How does the change in the output depend on the change in the input and the slope of the function at the point where the change occurs?

5. What is the significance of the change in the output in the context of the problem?

6. If the input changes by $h$, what is the change in the output in the context of the problem?

7. In the formula for the difference, $y_{new}$ is the new output after the input has been changed. How does this formula work for predicting the change in the output?

8. If the input is $x$ and the output is $y$, what is the change in the output when the input changes by $h$?

9. How does the change in the output depend on the change in the input and the slope of the function at the point where the change occurs?

10. If the input changes by $h$, what is the change in the output in the context of the problem?

11. What is the significance of the change in the output in the context of the problem?

12. If the input changes by $h$, what is the change in the output in the context of the problem?