**Summary:**

108 variations. Log laws. Transformational graphing

**Question:**

1. Simplify the following expression



Write your answer in the form *a* ln *bx* where *a* and *b* are real numbers.

1. The graph of the function  is shown below.



On the axes above, sketch the graph of the function 

1. Describe the relationship between the graphs of the functions  and 

**Solution:**

1. 



1. 