

Name:

Please show all your work to get the full credit. It consists of 4 questions.
It is due on Monday, 4th December.

1(2.5pts) Use the Laws of Logarithms to expand the expression.

$$\log\left(\frac{x}{\sqrt[3]{1-x}}\right)$$

2(2.5pts) Solve $3^{5-2y} = \sqrt[3]{3}$.

3(2.5pts) Write the expression $6 \log_{10} x - 7 \log_{10} y$ as a single logarithm.

4(2.5pts) Find all solutions of the equation $\log_{35} x + \log_{35} (x + 2) = 1$.