

Name: _____

Show work needed to justify your answer.

Date: _____

HW: # 39: Math IBSL - Standard 38 - Logarithms

5 points

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- 1** Describe the transformations required to map the graph of $f(x) = \log_3 x$ onto the graph of:
- a** $g(x) = \log_3 x + 4$
 - b** $h(x) = \log_3(x - 3)$
 - c** $i(x) = 2\log_3 x$
- 2 a** On separate axes, sketch the graph of each function.
Show the asymptote as a dashed line (if it is not the y -axis), and label the coordinates of the x -intercept in each case.
- a** $f(x) = \log x$
 - b** $g(x) = -\log x$
 - c** $h(x) = 3 + \log x$
 - d** $i(x) = 2\log(x + 2)$
- 3** Solve the equation $e^{x-3} = \log(x + 2)$ by plotting graphs of two appropriate functions on your GDC and finding any points intersection.
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