

Name: _____

Show work needed to justify your answer.

Date: _____

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

5 points

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- 1** If $x = \log 3$ and $y = \log 6$, write each expression in terms of x and y :
- a** $\log 18$ **b** $\log 2$ **c** $\log 9$
d $\log 27$ **e** $\log 36$ **f** $\log \frac{1}{2}$
- 2** If $m = \log_5 7$ and $n = \log_5 4$, write each expression in terms of m and n :
- a** $\log_5 28$ **b** $\log_5 \frac{7}{4}$ **c** $\log_5 49$
d $\log_5 64$ **e** $\log_5 \frac{49}{4}$ **f** $\log_5 \frac{7}{16}$
- 4** If $\log_3 P = x$ and $\log_3 Q = y$, write each expression in terms of x and y :
- a** $\log_3 P^3 Q$ **b** $\log_3 \frac{\sqrt{P}}{Q}$
- 5 a** Given that $\log x - \log(x - 5) = \log M$, express M in terms of x .
- b** Hence, or otherwise, solve the equation $\log x - \log(x - 5) = 1$
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