**HW**

Use the properties of logarithms to expand or simplify the following expression as much as possible. Simplify any numerical expressions that can be evaluated without a calculator.

| | | | |
|---|---|---|---|
| $\log_9(81x^3)$ | $\log_3\left(\frac{x-4}{x^7}\right)$ | $\log_{10} 5 + \log_{10} 2$ | |
| | | | |

| | |
|---|---|
| $\log_9(x^2+12x+32) - \log_9(x+8) = 0$ | $\log_5(x-1) + \log_5(x-3) = 1$ |
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