

***Objective:**

***Properties of Logarithms**

Got It? 1. What is each expression written as a single logarithm?

a. $\log_4 5x + \log_4 3x$

b. $2 \log_4 6 - \log_4 9$

Got It? 2. What is each logarithm expanded?

a. $\log_3 \frac{250}{37}$

b. $\log_3 9x^5$

***Change of Base Formula**

Got It? 3. Use the Change of Base Formula. What is the value of each expression?

a. $\log_8 32$

b. $\log_4 18$

Problem 4 Using a Logarithmic Scale **STEM**

Chemistry The pH of a substance equals $-\log [H^+]$, where $[H^+]$ is the concentration of hydrogen ions. $[H^+]_a$ for household ammonia is 10^{-11} . $[H^+]_v$ for vinegar is 6.3×10^{-3} . What is the difference of the pH levels of ammonia and vinegar?

Inclass: p. 466 #16, 26, 36, 38

Homework: p. 466 #9-37(odd)

Interactmath: #9, 11, 19, 22, 31, 33, 35, 37, 38