

AQUALOG

(A) Identify and correct the mistakes in the following expressions.

1) $\log(4+8) = \log 4 + \log 8$

Correction: $\log(4+8) = \underline{\hspace{2cm}}$

(A) $\log 32$

(B) $\log 12$

(C) $\log 4 \cdot \log 8$

2) $\log \frac{3}{2} = \frac{\log 3}{\log 2}$

Correction: $\log \frac{3}{2} = \underline{\hspace{2cm}}$

(A) $\log 3 - \log 2$

(B) $\log(3-2)$

(C) $\log \frac{2}{3}$

3) $\log(5 \cdot 25) = \log 5 \cdot \log 25$

Correction: $\log(5 \cdot 25) = \underline{\hspace{2cm}}$

(A) $5 \log 25$

(B) $\log(5+25)$

(C) $\log 5 + \log 25$

(B) Match the following equations to the laws of logarithms

Quotient rule

Product rule

Power rule

Change of base

$\log 9^2 = 2 \log 9$	
$\log 4 + \log 7 = \log 28$	
$\log_2 5 = \frac{\log_3 5}{\log_3 2}$	
$\log \frac{8}{11} = \log 8 - \log 11$	

(C) True or False ?

1) $\ln x + \ln y = \log_e xy$

TRUE

FALSE

2) $\log_3 9x = 2 \log_3 3x$

TRUE

FALSE

3) $\log_6 12 - \log_5 7 = \frac{\log 12}{\log 7}$

TRUE

FALSE

4) $\log \frac{x}{10} = \log x - 1$

TRUE

FALSE