Algebra 2 | Homework Review | Tues 10-30-12 | Class Notes

HW

(10) $\log_{\frac{1}{2}}(0.25)$

$4\left(\log_{\frac{1}{2}}\left(\frac{1}{4}\right)\right)$

$\left(\frac{1}{2}\right)^x = \frac{1}{4}$

$4 \cdot 2 = \boxed{8}$

HW (1) $\log_5 50 + \log_5 62.5$

$\log_5 (50 \cdot 62.5)$

$\log_5 3125$

$5^x = 3125$

$\boxed{x = 5}$

62.5
× 50
3125.0

Homework

(5) $\log_{10}(5.4) - \log_{10}(0.054)$

$$\log_{10}\left(\frac{5.4}{.054}\right)$$

$$\log_{10}\left(\frac{5400}{54}\right)$$

$$\log_{10}(100) \Rightarrow 10^{x} = 100$$

$$\boxed{x = 2}$$

WORKSHEET-WS

WORKSHEET EXAMPLES

① $2\log_7 10 + 6\log_7 11$

$\log_7 10^2 + \log_7 11^6$

$\boxed{\log_7 (100)(11^6)}$

WS ③ $\dfrac{\ln 3}{2} + \dfrac{\ln 10}{2} + \dfrac{\ln 7}{2}$

$\frac{1}{2}\ln 3 + \frac{1}{2}\ln 10 + \frac{1}{2}\ln 7$

$\ln 3^{\frac{1}{2}} + \ln 10^{\frac{1}{2}} + \ln 7^{\frac{1}{2}}$

$\boxed{\ln\left[(3^{\frac{1}{2}})(10^{\frac{1}{2}})(7^{\frac{1}{2}})\right]}$

$\ln\left[\sqrt{3}\sqrt{10}\sqrt{7}\right]$

$\boxed{\ln\sqrt{210} = \ln(210^{\frac{1}{2}})}$

✓

WS ⑨ $8\log_8 u - 4\log_8 V$

$\log_8 u^8 - \log_8 V^4$

$\boxed{\log_8\left(\frac{u^8}{V^4}\right)}$

WS ⑬ $\log_4(x \cdot y \cdot z^4)$ Expand

$\log_4 x + \log_4 y + \log_4 z^4$

$\boxed{\log_4 x + \log_4 y + 4\log_4 z}$

WS ⑮ $\log_2\left(\frac{u^4}{V}\right)^2$

$\log_2\left(\frac{u^8}{V^2}\right) = \log_2 u^8 - \log_2 V^2$

$\boxed{8\log_2 u - 2\log_2 V}$

WJ

(19) $\log_3(c^2\sqrt{a})$

$\log_3(c^2 a^{\frac{1}{2}})$

$\log_3 c^2 + \log_3 a^{\frac{1}{2}}$

$2\log_3 c + \frac{1}{2}\log_3 a$

or $2\log_3 c + \frac{\log_3 a}{2}$ *

WS

(23) $\log_4\left(\frac{5^3}{12}\right)^{-4}$ EXPAND

$\log_4\left(\frac{5^{12}}{12^4}\right)$

$\log_4 5^{12} - \log_4 12^4$

$12\log_4 5 - 4\log_4 12$