

## Unit 2 Class-work #2

**YOU MUST SHOW ALL YOUR WORK ON A SEPARATE SHEET OF PAPER! PLACE YOUR ANSWERS ON THIS WORKSHEET ONLY. ASSIGNMENT WILL BE GRADED ON 20% COMPLETION AND 80% ACCURACY. NO WORK = NO CREDIT**

**{2.4 Notes} - Rewrite each equation in exponential form.**

1)  $\log_u v = -\frac{8}{13}$

2)  $\log_{14} 196 = 2$

**{2.4 Notes} - Rewrite each equation in logarithmic form.**

3)  $y^x = 96$

4)  $18^2 = 324$

**{2.4 Notes} - Expand each logarithm.**

5)  $\log_6 (ab^5)^3$

6)  $\log_2 \frac{6^6}{7^4}$

**{2.4 Notes} - Condense each expression to a single logarithm.**

7)  $25 \log_8 u - 5 \log_8 v$

8)  $\log_4 x + \log_4 y + 6 \log_4 z$

**{2.4 Notes} - Use the Change of Base Formula and a calculator to approximate each to the nearest thousandth.**

9)  $\log_{12} 43$

10)  $\log_3 5$

11)  $\log_4 95$

12)  $\log_7 48$

**{2.2 Notes} - Solve each equation.**

13)  $625^{-3a-3} = 25$

14)  $\left(\frac{1}{3}\right)^{3v+2} = 81^{-v}$

15)  $9^{3x} = \left(\frac{1}{27}\right)^{-2x-3}$

16)  $25^{-2x+3} = 125^{-x}$

**{2.5 Notes} - Solve each equation. Round your answers to the nearest ten-thousandth.**

17)  $16^{x+4.2} + 5 = 12$

18)  $-6.6 \cdot 3^{n+5} = -10$

19)  $6^{10x} - 7 = 50$

20)  $\log(4x - 10) = \log(-x + 5)$

21)  $\log_{18}(5k + 8) = \log_{18}(4k + 2)$

22)  $5 + \log_3(10x + 7) = 4$

23)  $6\log_4(-8x + 2) = 18$

24)  $\log_5(5n + 5) - 7 = -8$

25)  $6\log_6(7a - 2) = 12$

26)  $\log_4(x - 9) - \log_4 8 = 2$

27)  $\log_9(x^2 + 5) - \log_9 3 = \log_9 67$

28)  $\log_6 7 - \log_6 3x = 1$

29)  $\log_4(x - 5) - \log_4 x = 1$

30)  $\log_{11}(4n^2 - 6n) = \log_{11}(27 + 3n^2)$