

5.3 HW Converting from Exponential to Logarithmic Forms

Practice – Introduction to Logarithms

Name _____ Date _____ Period _____

Write each exponential equation in logarithmic form.

1. $2.4^0 = 1$

3. $10^{-2} = 0.01$

2. $4^{1.5} = 8$

4. $3^x = 243$

Write each logarithmic equation in exponential form.

5. $\log_4 0.0625 = -2$

7. $\log_{0.9} 0.81 = -2$

6. $\log_x(-16) = 3$

8. $\log_6 x = 3$

Evaluate the following logarithms.

9. $\log_7 343$

11. $\log_3 \frac{1}{9}$

13. $\log_\pi \pi$

10. $\log_2 1$

12. $\log 0.001$

14. $\log_{0.1} 100$

Solve for x.

15. $\log_2 16 = x$

23. $\log_x 32 = 5$

16. $\log_{25} 5 = x$

24. $\log_x 25 = -2$

17. $\log_6 \frac{1}{216} = x$

25. $\log_x 7 = \frac{1}{2}$

18. $\log_7 1 = x$

26. $\log_x 8 = \frac{3}{4}$

19. $\log_b b^4 = x$

27. $\log_6 (2x + 4) = 3$

20. $\log_5 x = 3$

28. $\log_2 \left(1 + \frac{x}{2} \right) = 4$

22. $\log_6 x = 3$