

# 11-4 Logarithms 2

Name: \_\_\_\_\_

Time> Start: \_\_\_\_\_ Finish: \_\_\_\_\_ Total Time = \_\_\_\_\_

**Write the following in logarithm form.**

- |          |              |          |               |
|----------|--------------|----------|---------------|
| _____ 1. | $y = 3^5$    | _____ 2. | $27 = 3^x$    |
| _____ 3. | $16 = 2^y$   | _____ 4. | $m = 4^3$     |
| _____ 5. | $64 = 4^x$   | _____ 6. | $1000 = 10^x$ |
| _____ 7. | $y = 2^{10}$ | _____ 8. | $125 = 5^x$   |

**Solve the following.**

- |           |                          |           |                           |
|-----------|--------------------------|-----------|---------------------------|
| _____ 9.  | $\log_3 x = 3$           | _____ 10. | $\log_2 x = 4$            |
| _____ 11. | $\log_2 8 = x$           | _____ 12. | $\log_x 16 = 2$           |
| _____ 13. | $\log_{10} x = 3$        | _____ 14. | $\log_2 16 = x$           |
| _____ 15. | $\log_x 36 = 2$          | _____ 16. | $\log_x 1 = 4$            |
| _____ 17. | $\log_9 x = \frac{1}{2}$ | _____ 18. | $\log_2 \frac{1}{2} = x$  |
| _____ 19. | $\log_x 1 = 5$           | _____ 20. | $\log_2 \frac{y}{3} = 2$  |
| _____ 21. | $\log_5 \frac{y}{3} = 1$ | _____ 22. | $\log_2 \frac{y}{2} = 3$  |
| _____ 23. | $\log_2 \frac{y}{4} = 3$ | _____ 24. | $\log_x \frac{1}{16} = 4$ |