

Name _____ Class _____ Date _____

Chapter 7 Take-Home Quiz #15

Form G

Lessons 7-1 through 7-3

Do you know HOW?

1. For the function $y = 5^{(x-2)}$, identify the transformation of the parent function $y = 5^x$.

Write each equation in logarithmic form.

2. $64 = 8^2$

3. $125 = 5^3$

4. $729 = 3^6$

Graph each function. Then find the domain, range, and y-intercept.

5. $y = 3(2)^x$

6. $y = \left(\frac{1}{2}\right)^x$

Evaluate each logarithm.

7. $\log_3 243$

8. $\log_9 729$

9. $\log_4 256$

Do you UNDERSTAND?

10. **Error Analysis** A classmate says that $y = \left(\frac{3}{2}\right)^x$ represents exponential decay.

What is the student's mistake?