Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_

**Assignment: Solving Exponential Equations with Different Bases**

**Solve. Round to the nearest hundredth.**

1. $3^{x}=47$ 2. $3.5^{3x+1}=65$ 3. $4^{x}=80$

4. $2^{x+1}=7.3$ 5. $4^{x-9}=82^{4x}$ 6. $2^{x}=5^{x-2}$

7. $13^{2x}=78$ 8. $7^{x-2}=5^{x}$ 9. $6^{3x+1}=8$

10. $7^{3x}=12^{x+2}$ 11. $3^{x-3}=19$ 12. $40^{3x}=5^{2x+1}$

13. $7^{x-4}=8$ 14. $8^{2x}=52^{4x+3}$ 15. $5^{x+2}=15.3$

16. The expression  is equal to

F  G 

H *N* J 

17. Which equation is represented by the graph in the accompanying diagram?

![[image]]()



18. Convert  to exponential form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_