

Coordinate Algebra
Solving Exponential Equations Practice Worksheet

Name _____ Period _____

Solve for x.

1. $2^x = 64$

2. $\frac{1}{1000} = 10^x$

3. $10^x - 36 = 64$

4. $7^x + \frac{4}{49} = \frac{5}{49}$

5. $8^x + 4 = 68$

6. $3^x - 30 = -3$

7. $\frac{1}{2}(2^x) + 4 = 20$

8. $4(5^{3n}) = 500$

9. $32(4^{-r}) = \frac{1}{2}$

10. $6^{x+2} = 6^{3x+4}$

11. $3^{2x-4} = 3^{x+4}$

12. $7^{6x-1} = 1$

13. $2^{15x} = 16^{3x+4}$

14. $8^{2x} = 512^{x-5}$

15. $3^{x-7} = 27^{2x}$

16. $5^{3x} = \left(\frac{1}{25}\right)^{3x-9}$

17. $8^{3x} = \left(\frac{1}{4}\right)^{x+1}$

18. $10^{x+6} = \left(\frac{1}{100}\right)^{x+3}$

19. Which is the solution to the equation: $8(2^{-n}) + 1 = 1.5$

A. $n = -4$

B. $n = -2$

C. $n = 2$

D. $n = 4$