

PracticeStudent Edition
Pages 626–630**Solving Exponential Equations***Use logarithms to solve each equation.*

1. $3.5^x = 47.9$

2. $8.2^y = 64.5$

3. $7.2^{a-4} = 8.21$

4. $2^{b+1} = 7.31$

5. $y = \log_3 78.5$

6. $k = \log_4 91.8$

7. $4^{2x} = 9^{x-1}$

8. $7^{3b} = 12^{b+2}$

9. $17c^{\frac{2}{3}} = 44$

10. $7x^{\frac{9}{8}} = 111$

11. $5^{x^2-3} = 72$

12. $\sqrt[4]{3^{4x+5}} = 7^x$

Solve.

13. Jim wants to paint the walls of a room that is 15 feet wide and 20 feet long. The ceiling is 8 feet high. How many gallons of paint will he need if each gallon covers 350 square feet and he wants to give the room two coats of paint?