UNIT 4 • MODELING AND ANALYZING EXPONENTIAL FUNCTIONS
Lesson 1: Creating Exponential Equations

Practice 4.1.2: Creating and Graphing Exponential Equations in Two Variables   B

For problems 1–3, use a table of values to graph the exponential equations.

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

2. $y = 30(0.95)^x$

3. $y = 800(1.00267)^{12x}$

For problems 4–10, write an equation to model each scenario, and then graph the equation.

4. A basketball tournament begins with 64 teams. For each round, teams are paired up and play each other. At the end of each round, the losing teams are eliminated, reducing the number of teams by half.

5. Under certain conditions, a type of bacteria doubles every 36 hours. A Petri dish starts out with 16 of these bacteria.

6. The population of a town is increasing by 1.7% per year. The current population is 9,000 people.

7. The population of a town is decreasing by 2.2% per year. The current population is 15,000 people.

8. An investment of $2,500 earns 2.3% interest and is compounded monthly.

9. An investment of $300 earns 3.1% interest and is compounded weekly.

10. An investment of $500 earns 1.9% interest and is compounded daily.