

NAME: _____

UNIT 1 • RELATIONSHIPS BETWEEN QUANTITIES

Lesson 3: Creating and Graphing Equations in Two Variables

Practice 1.3.2: Creating and Graphing Exponential Equations

Use a table of values to graph the following exponential equations.

1. $y = 2(3)^x$
2. $y = 1000(0.25)^x$

Write an equation to model each scenario, and then graph the equation.

3. A population of insects doubles every month. This particular population started out with 20 insects.
4. The half-life of rhodium, Rh-106, is about 30 seconds. You start with 500 grams.
5. A stock is declining at a rate of 75% of its value every 2 weeks. The stock started at \$225.
6. A weed species triples in 6 days. A field started with 12 weeds in the early spring.
7. The population of a big city is increasing at a rate of 2.5% per year. The city's current population is 67,000.
8. An investment of \$1,000 earns 3.7% interest and is compounded semi-annually.
9. An investment of \$600 earns 2.9% interest and is compounded quarterly.
10. An investment of \$3,000 earns 1.4% interest and is compounded weekly.