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

For problems 1 and 2, use a table of values to graph the exponential equations.

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

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

For problems 3–10, write an equation to model growth or decay in 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 25% of its value every 2 weeks. The stock started at $225.

6. An invasive weed species triples its numbers 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 semiannually.

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.