Name _____ Date _____

In Exercises 1–3, identify the initial amount a and the rate of growth r (as a percent) of the exponential function. Evaluate the function when t = 5. Round your answer to the nearest tenth.

1. $f(t) = 220(1.015)^t$ 2. $p(t) = 5.5(1.5)^t$ 3. $h(t) = 2.5^t$

In Exercises 4 and 5, write a function that represents the situation.

4. A college's tuition of $135 per credit hour increases by 5% each year.

5. A bee population of 3000 increases by 40% every year.

In Exercises 6–8, identify the initial amount a and the rate of decay r (as a percent) of the exponential function. Evaluate the function when t = 3. Round your answer to the nearest tenth.

6. $f(t) = 1420(0.895)^t$ 7. $y = \left(\frac{3}{5}\right)^t$ 8. $y = 9.2\left(\frac{1}{3}\right)^t$

In Exercises 9 and 10, write a function that represents the situation.

9. A $25,000 car decreases by 16.7% each year.

10. A company's annual revenue of $487,000 decreases by 4.2% each year.

In Exercises 11 and 12, determine whether the table represents an *exponential growth function*, an *exponential decay function*, or *neither*. Explain.

11.

x	2	4	6	8
y	5	10	15	20

12.

x	1	5	9	13
y	81	54	36	24

13. The table shows the total numbers of shares of an initial public offering purchased *t* days after it opens on the stock market.

x	1	2	3	4
y	6250	2500	1000	400

   a. Determine whether the table represents an exponential growth function, an exponential decay function, or neither.

   b. How many shares were purchased after the stock had been opened for 6 days?