

6.1 Notetaking with Vocabulary (continued)**Extra Practice**

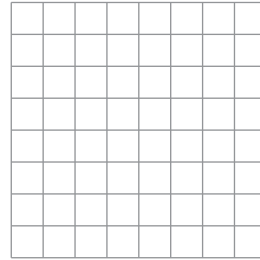
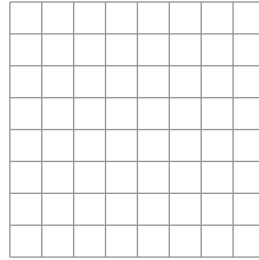
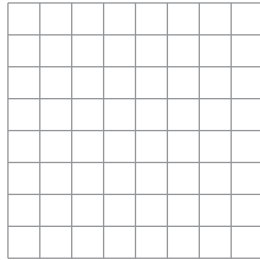
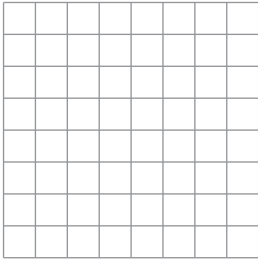
In Exercises 1–4, tell whether the function represents *exponential growth* or *exponential decay*. Then graph the function.

1. $y = \left(\frac{1}{12}\right)^x$

2. $y = (1.5)^x$

3. $y = \left(\frac{7}{2}\right)^x$

4. $y = (0.8)^x$



5. The number of bacteria y (in thousands) in a culture can be approximated by the model $y = 100(1.99)^t$, where t is the number of hours the culture is incubated.

a. Tell whether the model represents exponential growth or exponential decay.

b. Identify the hourly percent increase or decrease in the number of bacteria.

c. Estimate when the number of bacteria will be 1,000,000.

In Exercises 6 and 7, use the given information to find the amount A in the account earning compound interest after 5 years when the principal is \$1250.

6. $r = 2.25\%$, compounded quarterly

7. $r = 1.25\%$, compounded daily