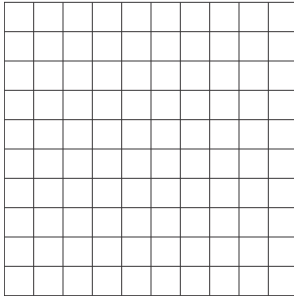# 6-2 Additional Practice

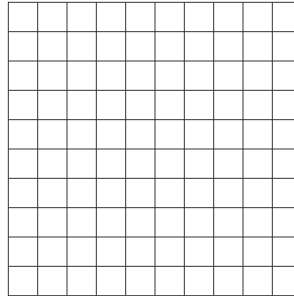## Exponential Functions

Graph each exponential function.
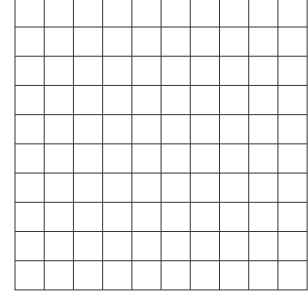
1. $f(x) = 3^x$

2. $f(x) = \left(\frac{1}{4}\right)^x$

3. $f(x) = 8 \cdot 1.2^x$

Write an equation for each exponential function.

4.

5.

x	y
0	5
1	10
2	20
3	40

6.
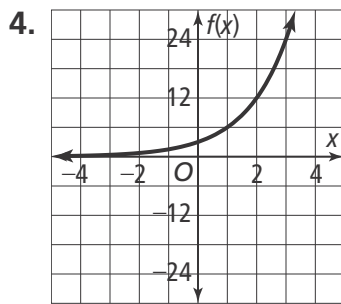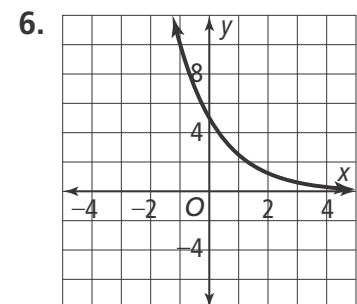
7. Explain the key features of the exponential function $y = a \cdot b^x$, including the asymptote, key points on the graph, domain, and range.

8. The function $f(x) = 5{,}000 \cdot 1.05^x$ models an investment of $5,000 earning 5% annually. Identify and interpret the values of a and b. What is the balance of the investment after 15 years, assuming no further deposits or withdrawals?