

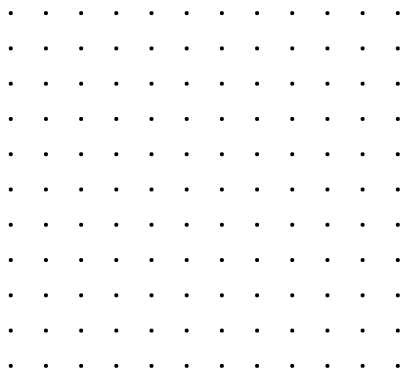
Sec1H **HW 7-1** **Unit 7**
Shifting Exponential Functions

For each of the following functions do the following.

- a) Identify the growth factor.
- b) Identify the y-intercept.
- c) Identify the asymptote.
- d) Make a table, and graph the function. Label the asymptote, & y-intercept.

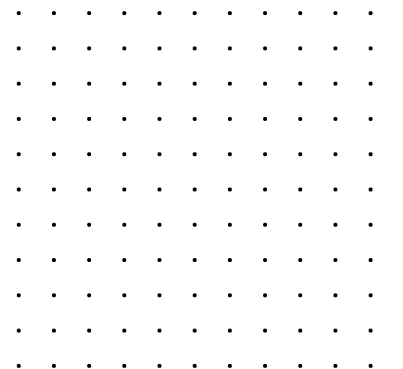
1. $y = 3^x + 2$

Growth Factor _____
 y-intercept _____
 Asymptote _____



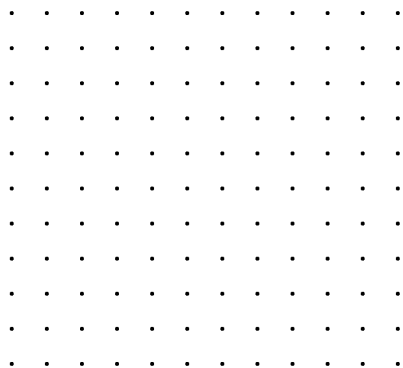
2. $y = 3(2)^x - 1$

Growth Factor _____
 y-intercept _____
 Asymptote _____



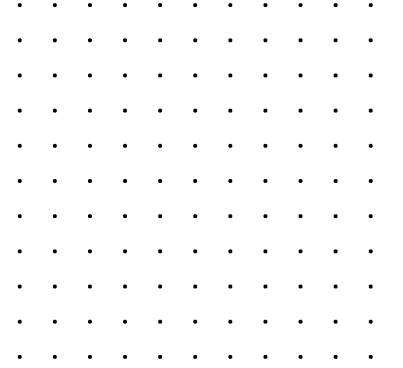
3. $y = 4\left(\frac{1}{2}\right)^x - 2$

Growth Factor _____
 y-intercept _____
 Asymptote _____



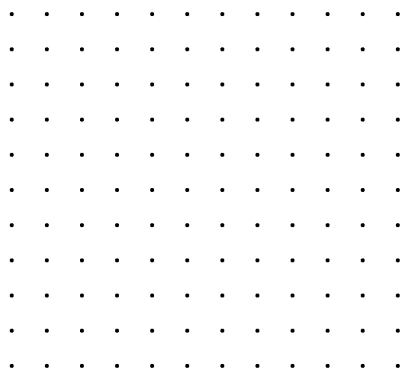
4. $y = -9 \cdot \left(\frac{1}{3}\right)^x$

Growth Factor _____
 y-intercept _____
 Asymptote _____



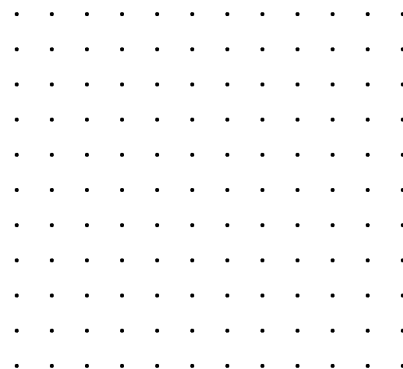
5. $y = \frac{1}{2}(4)^x + 3$

Growth Factor _____
 y-intercept _____
 Asymptote _____



6. $y = -6 \cdot 2^x$

Growth Factor _____
 y-intercept _____
 Asymptote _____



Match the function with its correct asymptote and y-intercept.

7. $f(x) = 5(3)^x + 2$

A. asymptote: $y = 2$
 y-intercept: $(0, 3)$

8. $g(x) = 2(3)^x + 5$

B. asymptote: $y = 2$
 y-intercept: $(0, 7)$

9. $h(x) = 1(3)^x + 2$

C. asymptote: $y = 5$
 y-intercept: $(0, 7)$

Write an exponential function to match the criteria or graph.

10. Growth Factor : $\frac{2}{5}$
 y-intercept: -4
 asymptote: 2

11. Growth Factor : 4
 y-intercept: $\frac{3}{4}$
 asymptote: 2

