

## Lesson 2.1

Write the explicit formula for each sequence.

1)  $-3.7, -1.8, 0.1, 2, 3.9, \dots$

2)  $-16, -8, -4, -2, -1, \dots$

3)  $-\frac{7}{4}, -\frac{5}{4}, -\frac{3}{4}, -\frac{1}{4}, \frac{1}{4}, \dots$

4)  $2, -6, 18, -54, 162, \dots$

5)  $17, -13, -43, -73, -103, \dots$

6)  $-4, 8, -16, 32, -64, \dots$

Identify whether the following items best fit with a discrete or a continuous model. Then determine whether it is a linear, arithmetic, exponential, or geometric relationship that is being described.

7) The freeway construction crew pours 300 feet of concrete in a day.

8) For every hour that passes, the amount of area infected by the bacteria doubles.

9) To meet the demands placed on them the brick layers have started laying 5% more brick each day.

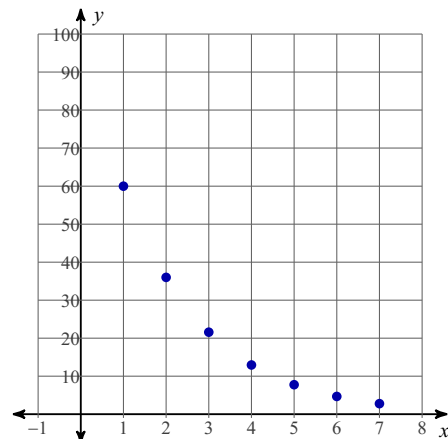
10) The average person takes 10,000 steps in a day.

11) The city of Buenos Aires has been adding 8% to its population every year.

12) At the headwaters of the Mississippi River the water flows at a surface rate of 1.2 miles per hour.

13)  $f(n) = f(n-1) + 3; f(1) = 5$

14)



15)  $g(x) = 2^x \cdot 7$

**Find the missing term or terms in each arithmetic sequence.**

16) ..., -29, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 16, ...

17) ..., 28, \_\_\_\_, \_\_\_\_, \_\_\_\_, 428, ...

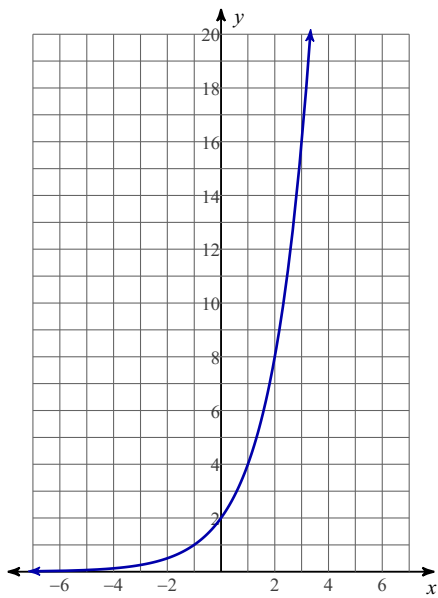
**Find the missing term or terms in each geometric sequence.**

18) ..., -1, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, -243, ...

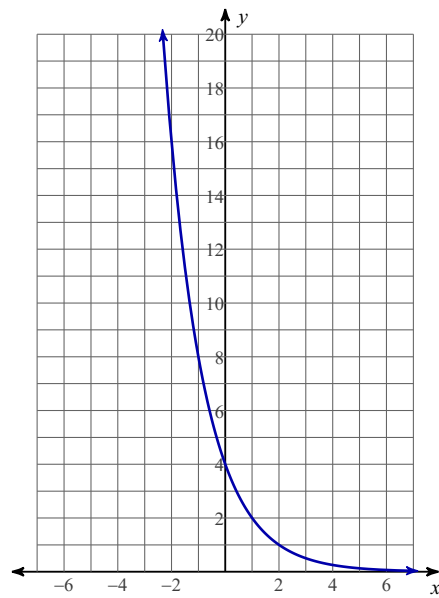
19) ..., 3, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 2187, ...

**Write an equation for each graph.**

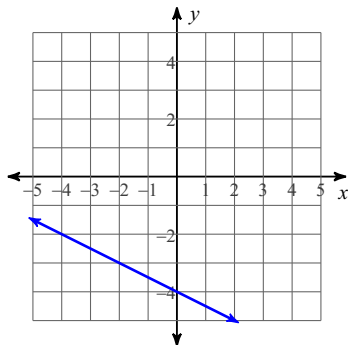
20)



21)



22)



23)

