



# Function Representations

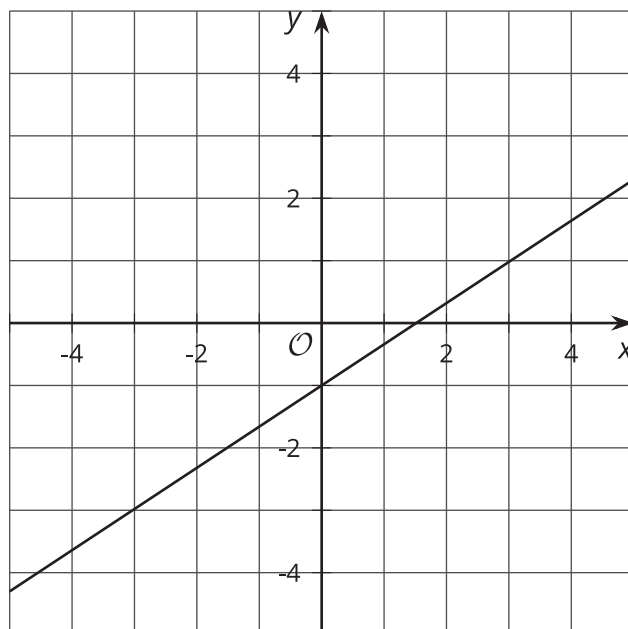
Let's examine different representations of functions.

## 5.1 Notice and Wonder: Representing Functions

What do you notice? What do you wonder?

$$f(x) = \frac{2}{3}x - 1$$

| $x$ | $y$            |
|-----|----------------|
| -1  | $-\frac{5}{3}$ |
| 0   | -1             |
| 1   | $-\frac{1}{3}$ |
| 2   | $\frac{1}{3}$  |
| 3   | 1              |



## 5.2 A Seat at the Tables

Use the equations to complete the tables.

1.  $y = 3x - 2$

| $x$ | $y$ |
|-----|-----|
| 1   |     |
| 3   |     |
| -2  |     |

2.  $y = 5 - 2x$

| $x$ | $y$ |
|-----|-----|
| 0   |     |
| 3   |     |
| 5   |     |

3.  $y = \frac{1}{2}x + 2$

| $x$ | $y$ |
|-----|-----|
| -4  |     |
| 3   |     |
| 6   |     |

4.  $y = 2x - 10$

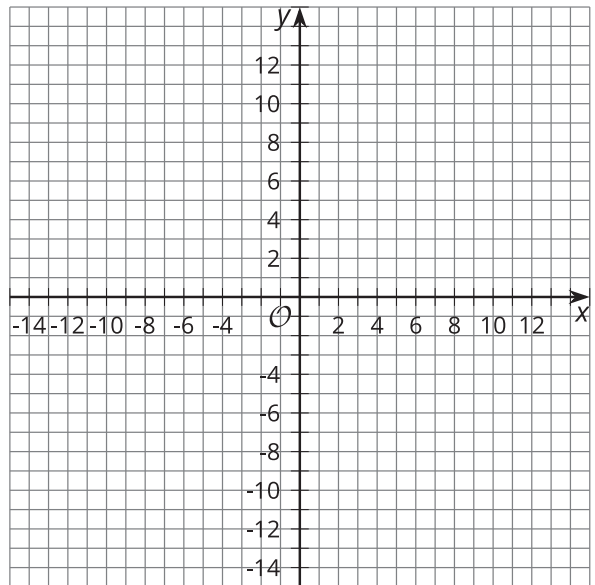
| $x$ | $y$ |
|-----|-----|
| 3   |     |
| 7   |     |
| -8  |     |

## 5.3 Function Finder

1. Use the values in the table to graph a possible function that would have the values in the table.

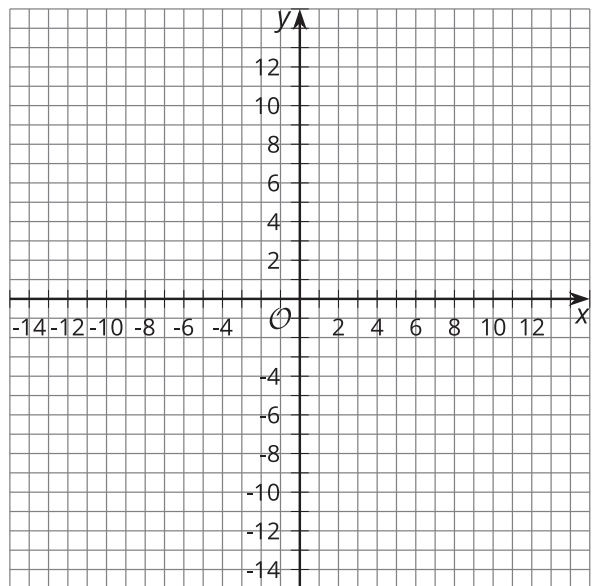
a.

| $x$ | $y$ |
|-----|-----|
| 1   | 3   |
| 2   | 5   |
| 3   | 7   |
| 5   | 11  |



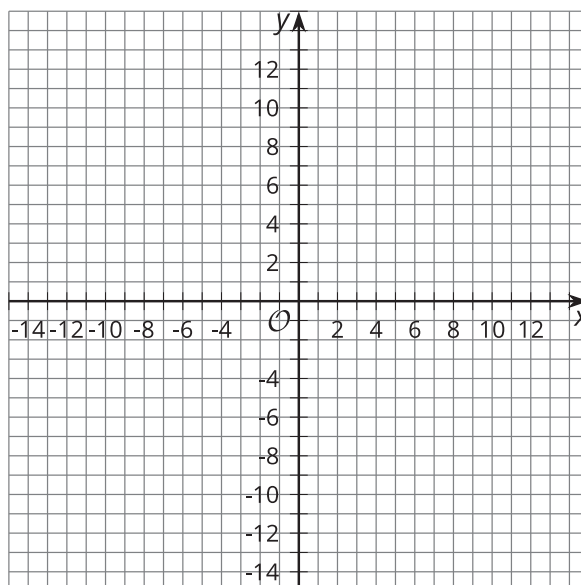
b.

| $x$ | $y$ |
|-----|-----|
| -2  | 0   |
| 0   | 1   |
| 2   | 2   |
| 4   | 3   |



c.

| $x$ | $y$ |
|-----|-----|
| -2  | 14  |
| -1  | 12  |
| 1   | 8   |
| 2   | 6   |



- For each of the tables, write a linear equation (like  $y = ax + b$ ) so that the table can be created from the equation.
- Invent your own linear equation. Then, create a table or graph, including at least 4 points, to trade with your partner. After getting your partner's table or graph, guess the equation that your partner invented.