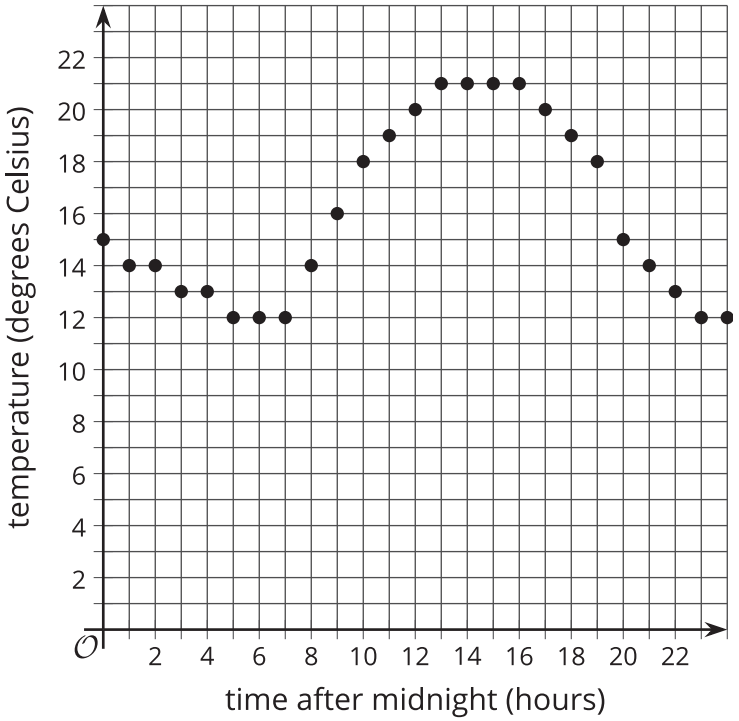
Unit 5, Lesson 2

Understanding Points in Situations

Let's understand points on a function in a situation.

2.1 A Day of Temperature

The temperature for a city is a function of time after midnight. The graph shows the values on a particular spring day.



1. What does the point on the graph where $x = 15$ mean?

2. What is the temperature at 5 p.m.?

3. What is the hottest it gets on this day?

4. What is the coldest it gets on this day?

2.2 What Happens to -2?

For each of these equations, find the value of y when $x = -2$.

1. $y = 3x - 4$

2. $y = 10 - 2x$

3. $y = \frac{3}{2}x + 5$

4. $y = 2(x - 1) + 4$

5. $y = -x + 19$

6. $y = \frac{x-3}{8}$

7. $y = 0.3x + 5$

2.3 It's Heating Up!

A sample for a science experiment is being warmed steadily in a machine. The temperature of the sample (in degrees Fahrenheit) is a function of time (in seconds) after it was put in the machine. This can be represented by the equation $y = 2.1x + 86$.

1. What does it mean when $x = 2$?

2. What is the temperature in that situation?

3. What does it mean when $y = 122$?

4. A graph of this equation goes through the point $(60, 212)$. What does that mean?

5. Give 2 values for x for which the model is not expected to apply. Explain your reasoning.

6. Give 2 values for y for which the model is not expected to apply. Explain your reasoning.