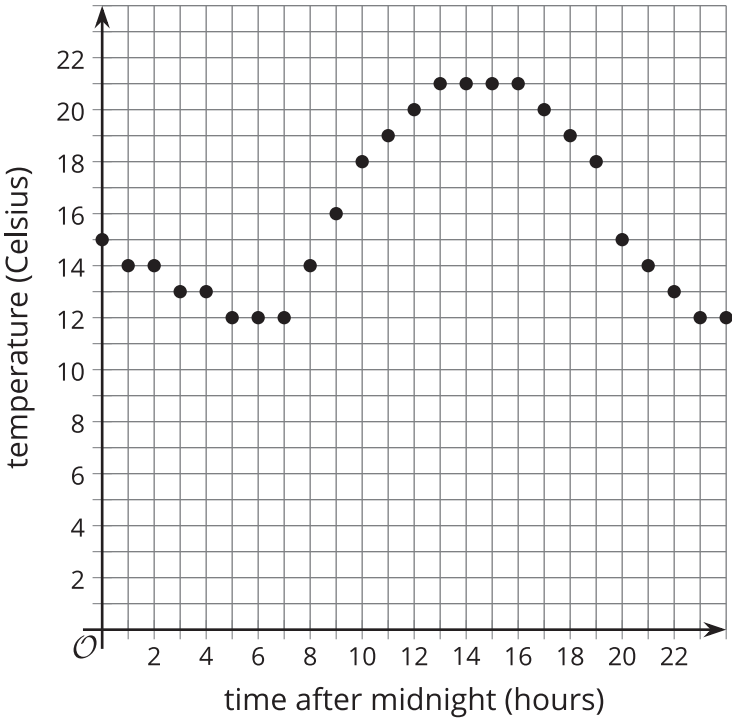
Unit 4 Lesson 2: Understanding Points in Situations

1 A Day of Temperature (Warm up)

Student Task Statement

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 What Happens to -2?

Student Task Statement

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. $y = 0.3x + 5$

3 It's Heating Up!

Student Task Statement

The temperature, in degrees Fahrenheit, of a scientific sample being warmed steadily as a function of time in seconds after the sample is put in a machine 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 that do not make sense. Explain your reasoning.
6. Give 2 values for y that do not make sense. Explain your reasoning.