

14.5

Elevations of Places

The term "elevation" is often used to describe the height of a place (such as a city, a mountain, or a valley) compared to sea level. For example, the highest point of Houston, Texas has an elevation of 105 feet. The surface of the sea has an elevation of 0 feet. Some places are below sea level, so their elevations are negative values.

1. The table shows the elevation, e , of several towns.

Function f gives the vertical distance of each town from sea level. Both e and $f(e)$ are measured in feet. Complete the table of values.

e	180	12.1	5.4		-5.4	-36	-180
$f(e)$				0			

2. Write an equation to represent $f(e)$.
3. Two towns have different elevations, but when the elevations are used as inputs of $f(e)$, they both produce an output of 25.

What are the elevations of the two towns? Why do they produce the same output?

