

# 5 Representations of a Function

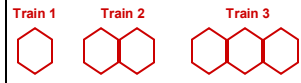
## Language

- A linear relationship with a y-intercept at (0,2) and a slope of 4.
- This linear relationship passes through the points (-1, -2) and (4, 13).
- This quadratic relationship has a minimum at (0, 1) with no x-intercepts.

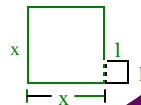
## Context

Xiong currently has \$1. He plans to save \$3 each week. In how many weeks will he have enough money to buy a \$40 item?

For the pattern shown below, compute the perimeter for the first four trains, determine the perimeter for the tenth train without constructing it.



Keesha is building a sandbox like the one pictured below, what are some possible areas (in square meters) for her new sandbox?

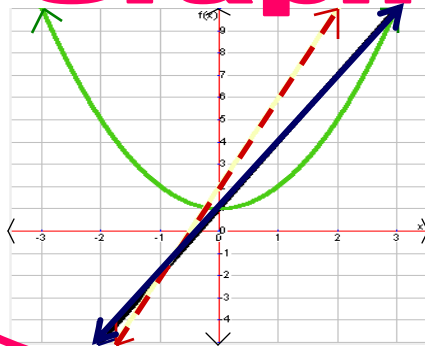


## Table

x	f(x)	x	y	Train #	Perimeter
0	1	0	1	1	6
1	4	1	2	2	10
2	7	2	5	3	14
3	10	3	10	4	18
		4	17		
		5	26		

Can you connect each Graph, Equation, Table, Context and Language?

## Graph



## Equation

$$y = 3x + 1$$

$$-3x + y = 1$$

$$f(x) = x^2 + 1$$

$$P = 4n + 2$$

$$P = 2(2n + 1)$$

$$x = \pm \sqrt{y - 1}$$

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