

5 Representations of a Function

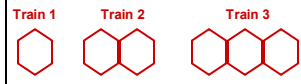
Language

- 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.

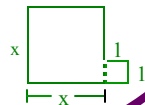
Context

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?

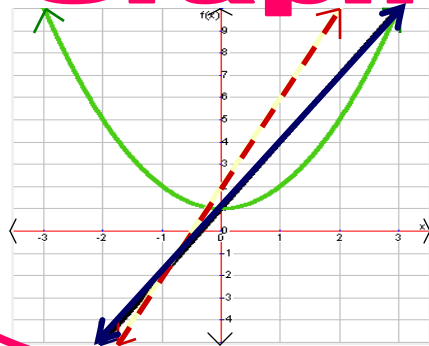


Table

| 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

$$y = 3x + 1$$

$$-3x + y = 1$$

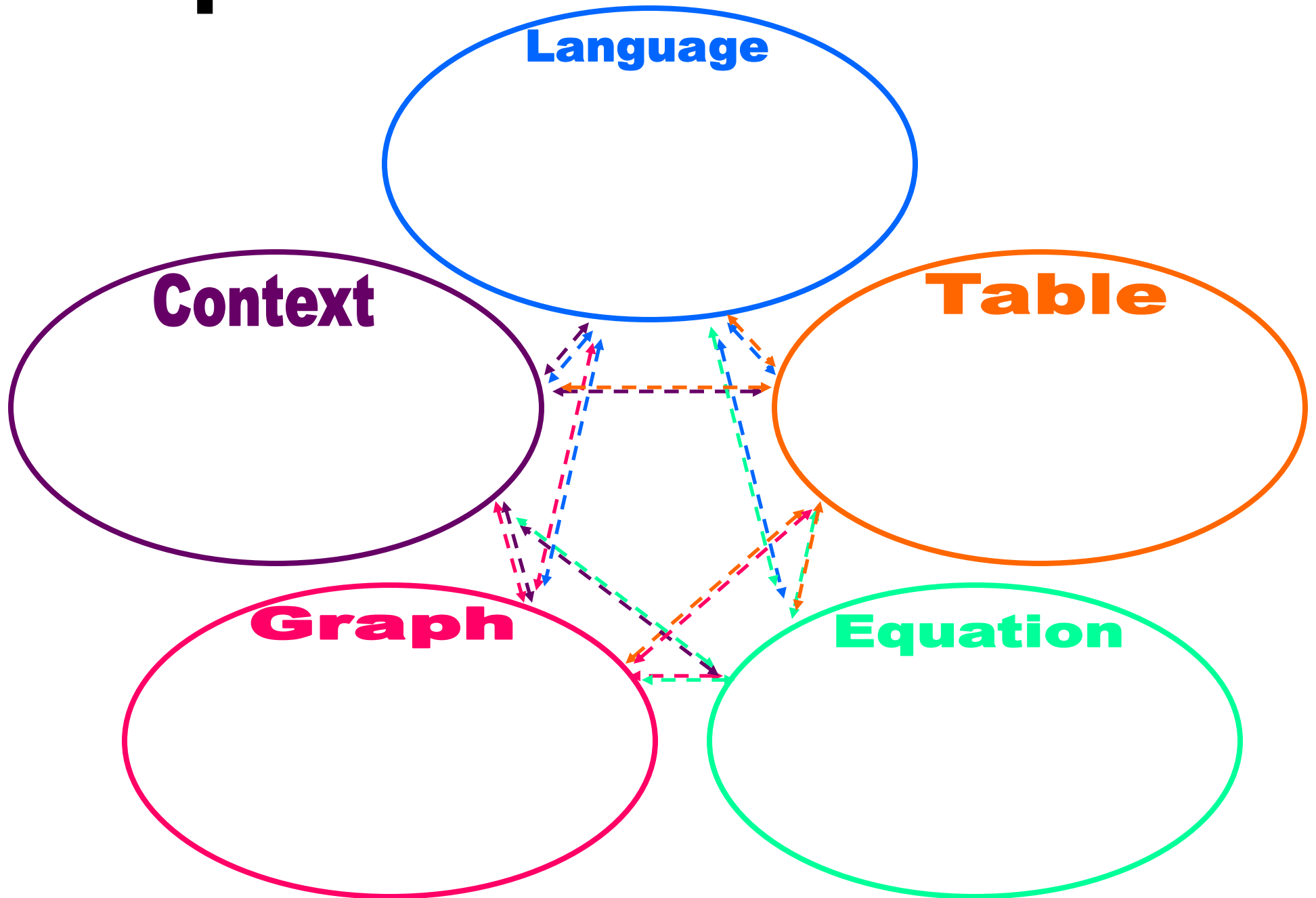
$$f(x) = x^2 + 1$$

$$P = 4n + 2$$

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

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

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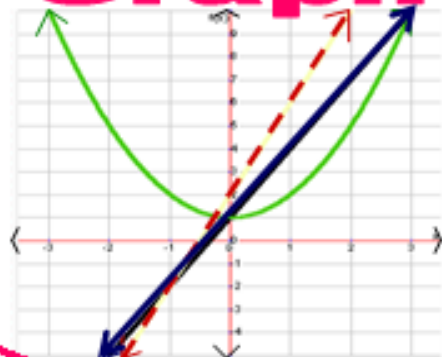


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