

Math-3 Lesson 1-2 (Vocabulary)

Parent Function: The simplest function in a family of functions (linear, quadratic, cubic functions, etc.)

Transformation: an adjustment made to the parent function that results in a change to the graph of the parent function (left/right shifts, up/down shifts, reflection across x-axis and/or y-axis, vertical and/or horizontal stretching) according to the general transformation equation:

$$y = (-1)a(x - h)^2 + k$$

The diagram shows the equation $y = (-1)a(x - h)^2 + k$ with four arrows pointing from labels below to specific parts of the equation:

- An arrow points from "Reflection across x-axis" to the (-1) coefficient.
- An arrow points from "VSF" (Vertical Stretch Factor) to the a coefficient.
- An arrow points from "left/right" to the $(x - h)$ term.
- An arrow points from "up/down" to the $+ k$ constant term.