

Transformation Rules

Multiplying changes the Size of the shape.

Dilation

→ ex. $3x$

Multiplying x by a number...

- * greater than 1 makes wider
- * less than 1 makes thinner

↳ ex. $\frac{1}{3}x$

Multiplying y by a number...

- * greater than 1 makes taller $3y$
- * less than 1 makes shorter $\frac{1}{3}y$

Adding/Subtracting changes the Location of the shape.
(It moves the shape.)

Translation

to the x

- * adding moves Right $x+5$ ^{ex}
- * subtracting moves Left $x-5$

to the y

- * adding moves Up $y+5$ ^{ex}
- * subtracting moves Down $y-5$