

Before we begin, are there any questions from last day's work?

Today's Learning Goal(s):

By the end of the class, I will be able to:

- a) understand the 3 basic transformations:
reflections, stretches/compressions, and translations

Note: There is no handout today.

Copy the goals on a blank sheet of paper.
Use the "Desmos" link in Google Classroom to complete
pp.174-175 Investigate A, B, & C.

*Discuss Gizmos
Homework on next
screens.*

Demo ^

Next: READ p.177 "Key Concepts"

For the assigned work, Create sketches, not graphs: p. 178 #1, 2, 3, 4

[start with $y = x^2$, then sketch transformation]

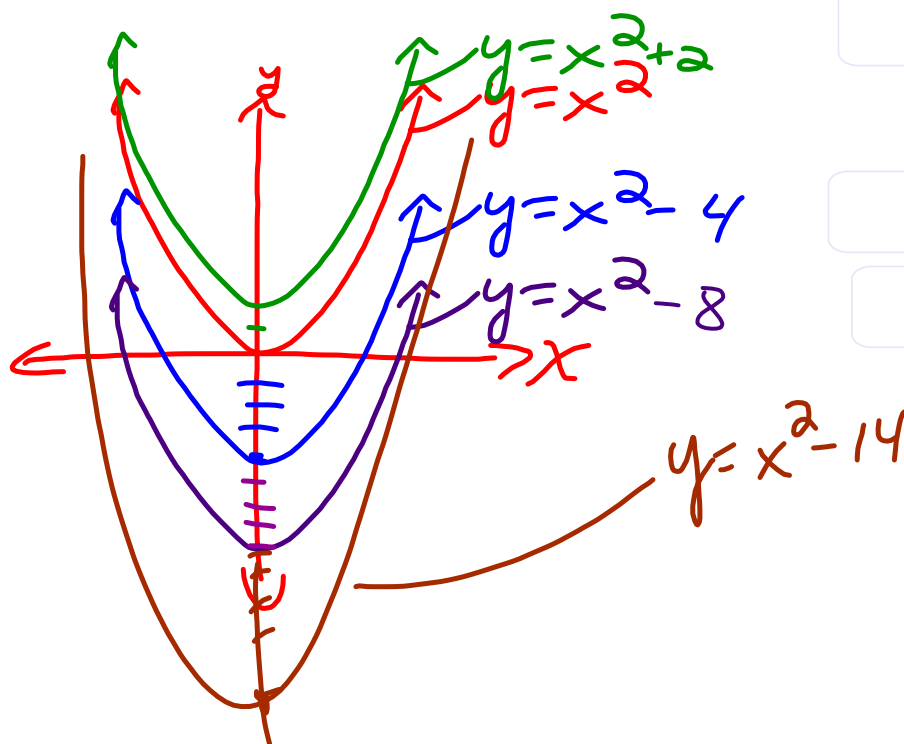
$$y = a(x-h)^2 + k$$

$$y = x^2 + k$$

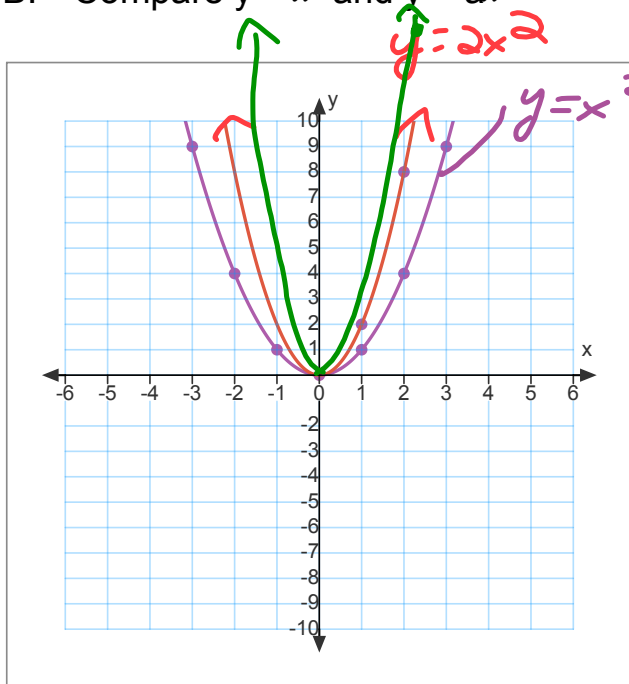
$$y = ax^2$$

$$y = (x-h)^2$$

Investigate A: Compare $y = x^2$ and $y = x^2 + k$

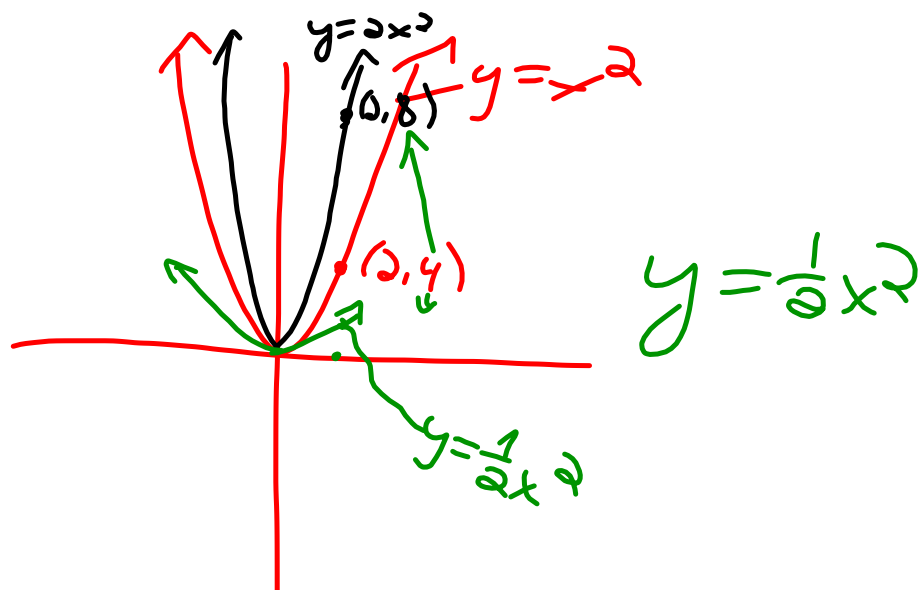


Investigate B: Compare $y = x^2$ and $y = ax^2$



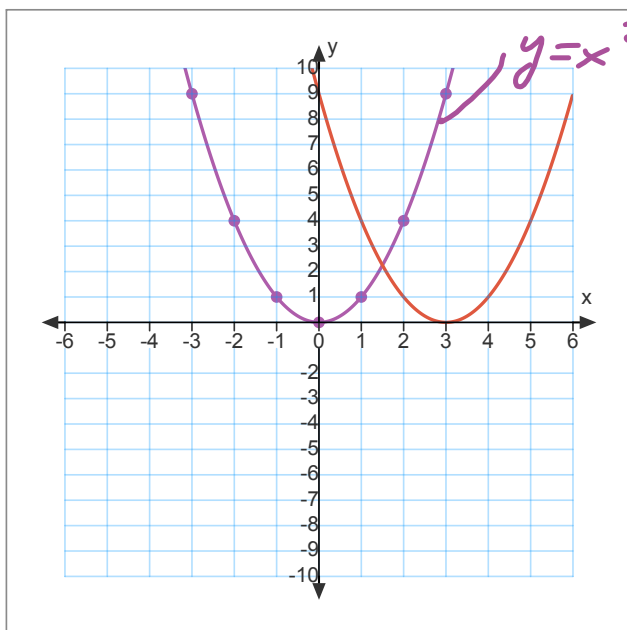
$y = x^2$
 $y = 3x^2$
 $y = 2x^2$
 $y = 2(x^2)$
 $y = x^2 + 2$

Investigate B: Compare $y = x^2$ and $y = ax^2$



Investigate C: Compare $y = x^2$ and $y = (x - h)^2$

see much further below, too



$$y = x^2$$

$$h = 3$$

$$y = (x - 3)^2$$

drag to grid

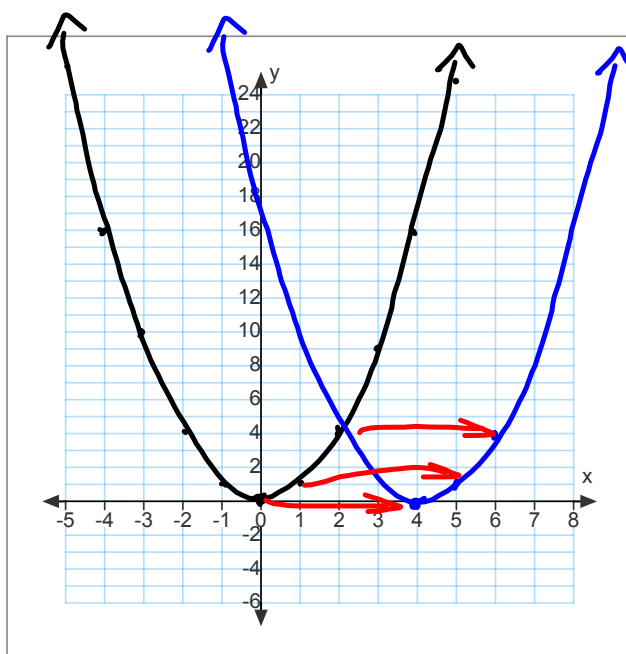
$$y = 2x^2$$

$$y = x^2 + 2$$

$$h = -4$$

$$y = (x - (-4))^2$$

$$= (x + 4)^2$$



$$y = x^2$$

$$y = (x - 4)^2$$

$$v(4, 0)$$

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For the assigned work, Create **sketches**, not graphs: p. 178 #1, 2, 3, 4
[start with $y = x^2$, then sketch transformation]

Enrichment: p.179 #12

