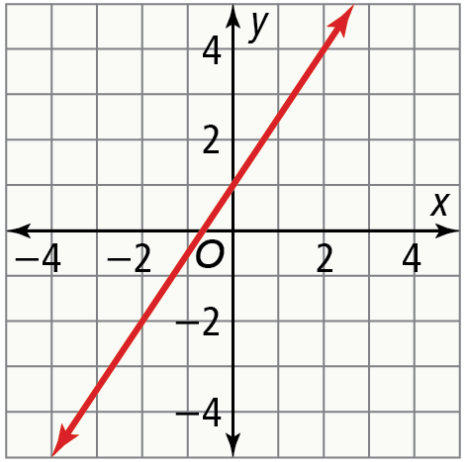
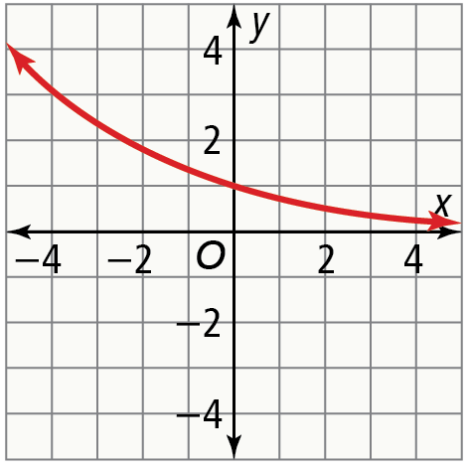
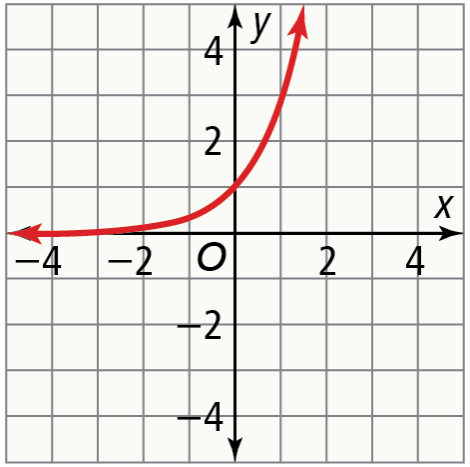
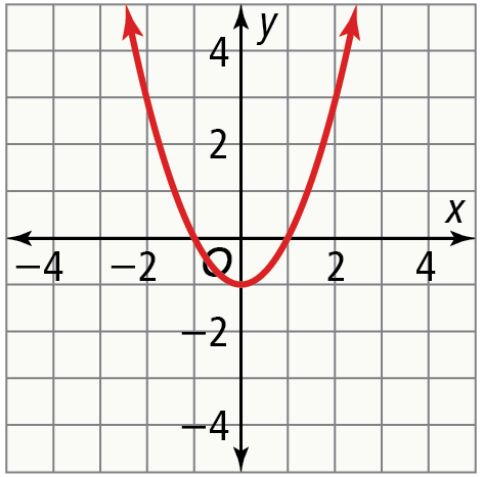
Which One Doesn't Belong?





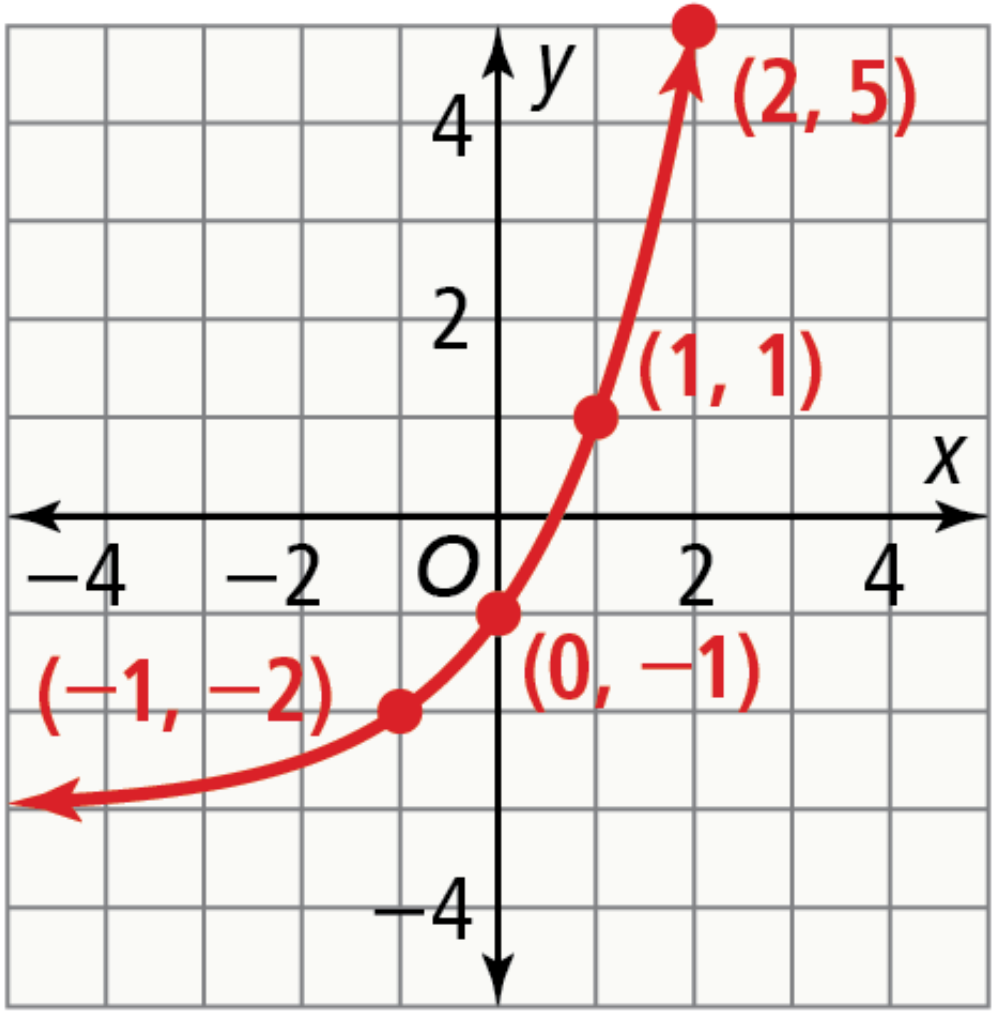




Which One Doesn't Belong? – Teacher Notes

Encourage students to use what they know about functions to identify unique features of each graph. Give students time to discuss the graphs of the functions with a partner. Challenge them to explain why each function is different from the others.

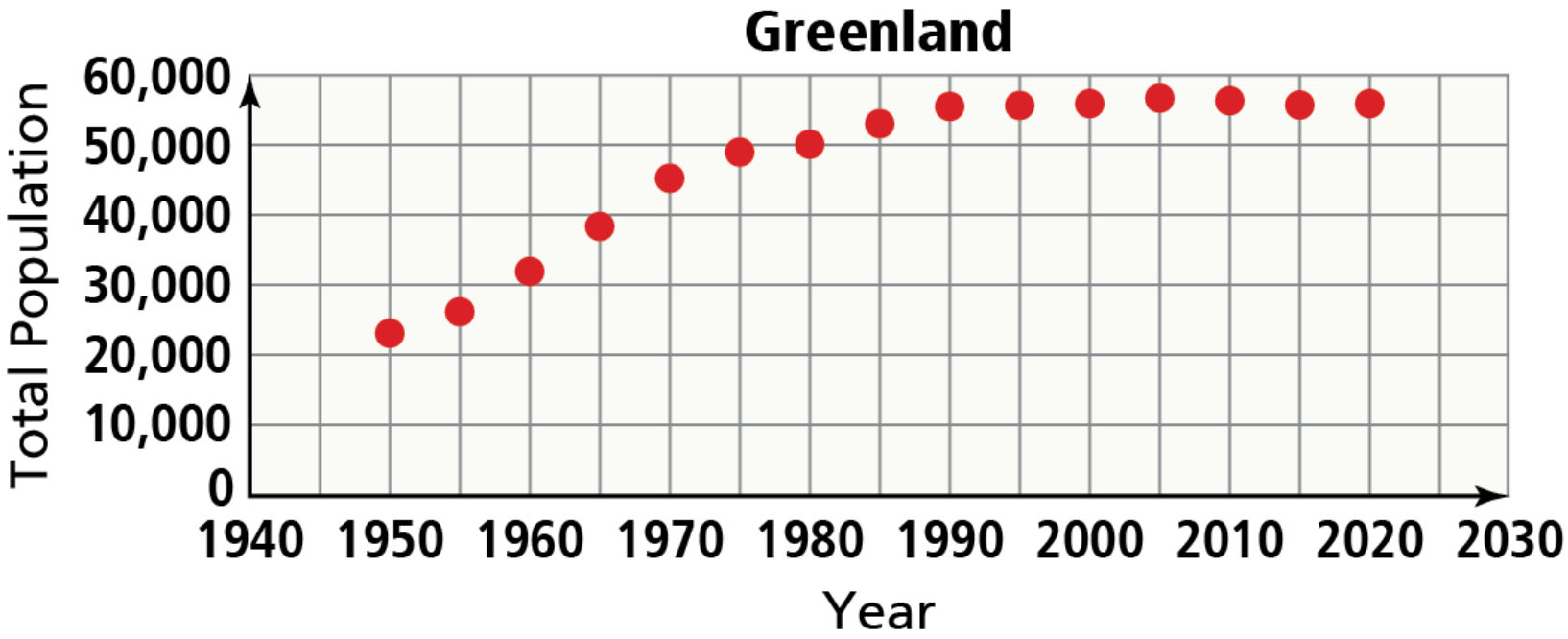
Find a Rule



Find a Rule – Teacher Notes

Challenge students to identify a rule for the graph and the horizontal asymptote. Give students time to discuss strategies with a partner. Listen for understanding that the graph shows a transformation of an exponential function.

Every Picture Tells a Story



Every Picture Tells a Story – Teacher Notes

The scatterplot shows the growth of the population of Greenland over time. After discussion with a partner, ask students to identify key features of the trend shown and to suggest the type of function that might best model the data. Challenge students to tell a story that explains the pattern of population growth.

Equation Detective

Find the Mistake

Carlos took the equation $y = x^2 + 4x - 6$ and converted it to vertex from; $y + 6 = (x + 2)^2$.

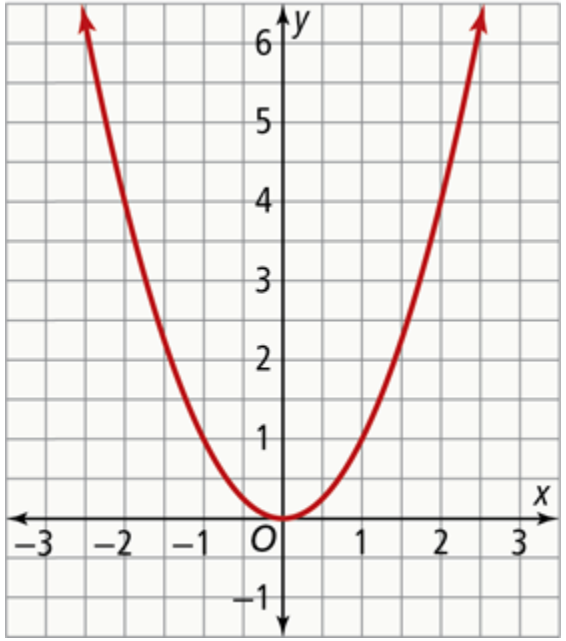
Is he correct?

Equation Detective – Teacher Notes

False; Equation should be y+10=(x+2)^2. Listen for the students who identify the conversion as true.
Discuss the steps of converting from standard form to vertex form by completing the square.
Ask students why equations are converted to vertex form. F.IF.7A

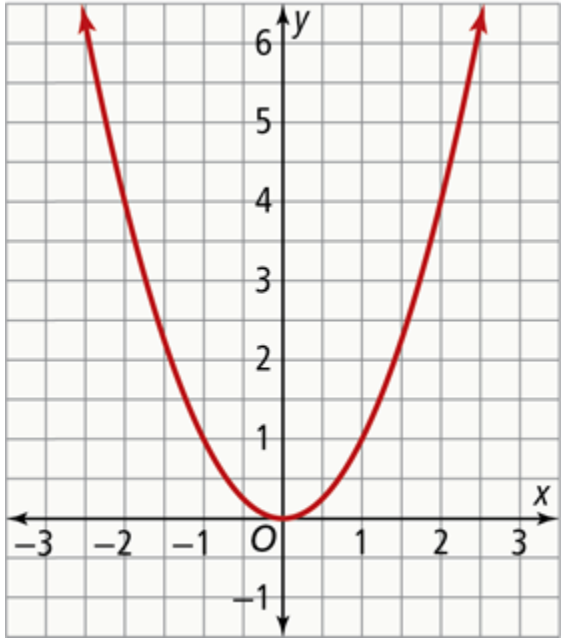
Slow Reveal Graph (1 of 4)

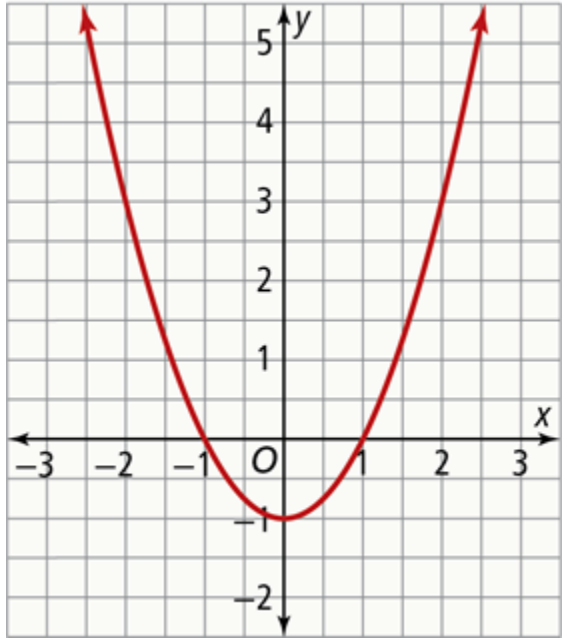
What do you notice? What do you wonder?



Slow Reveal Graph (2 of 4)

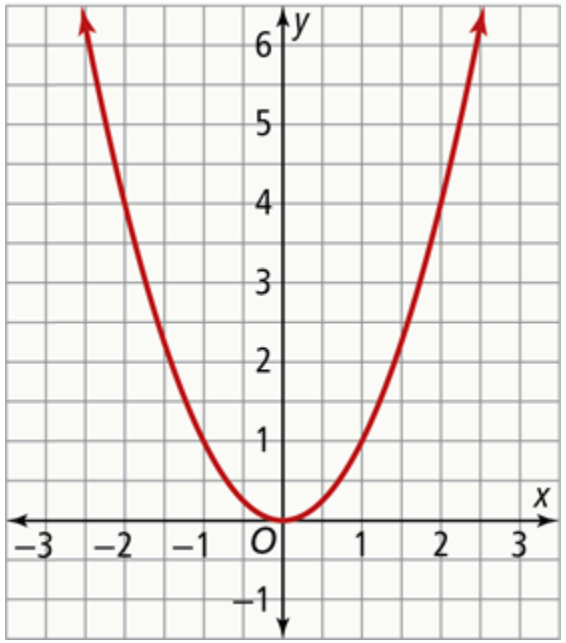
What do you notice? What do you wonder?

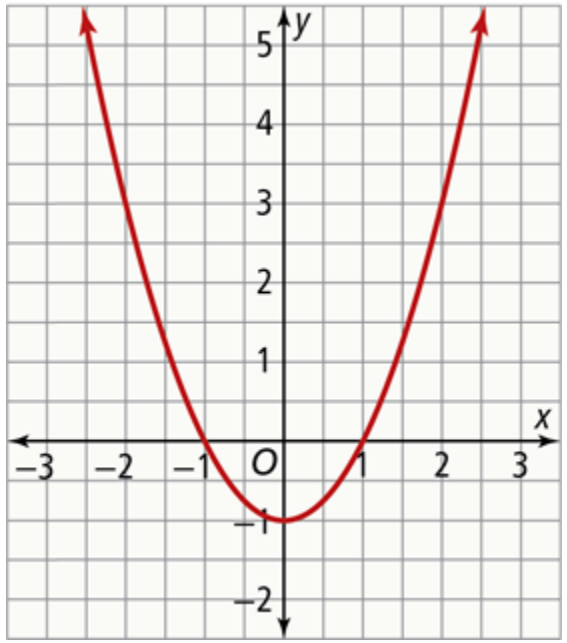


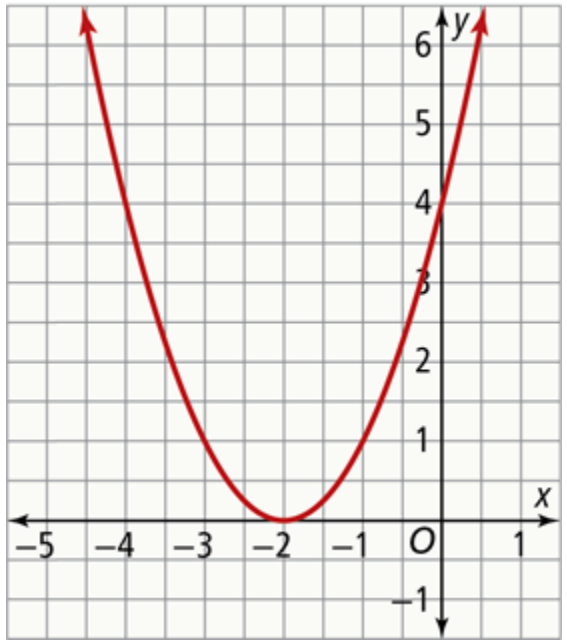


Slow Reveal Graph (3 of 4)

What do you notice? What do you wonder?

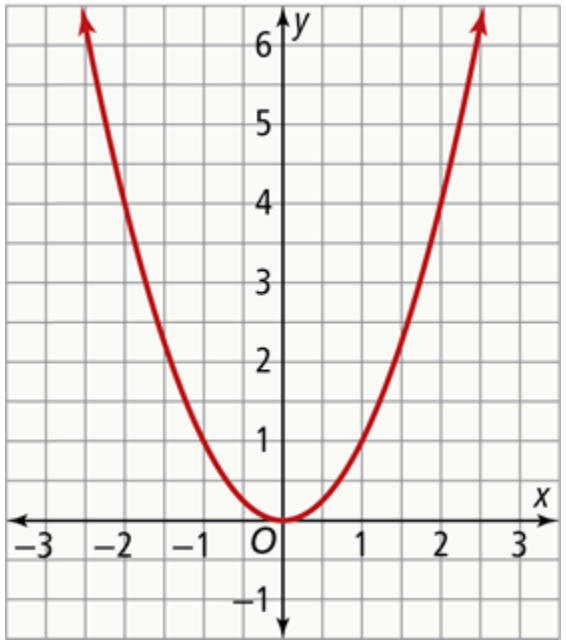


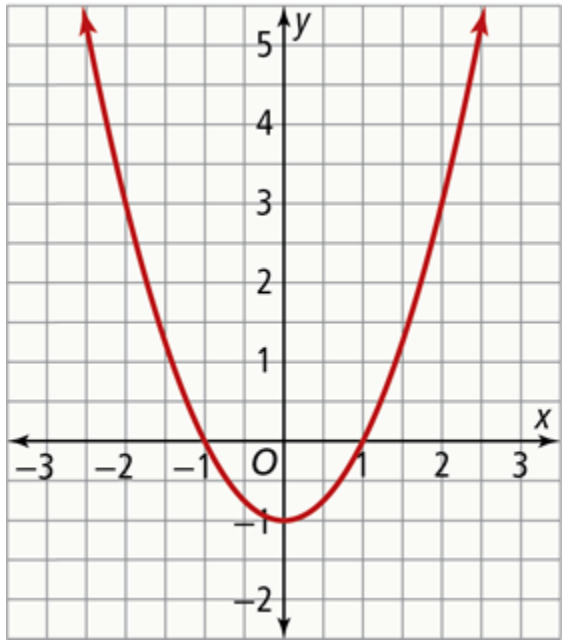


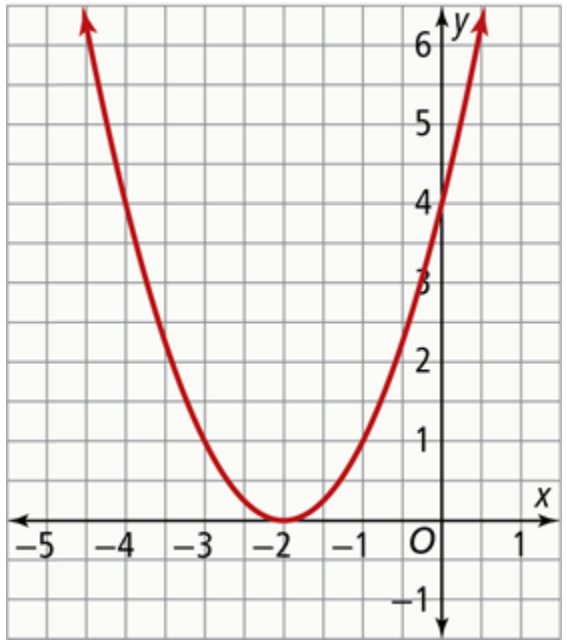


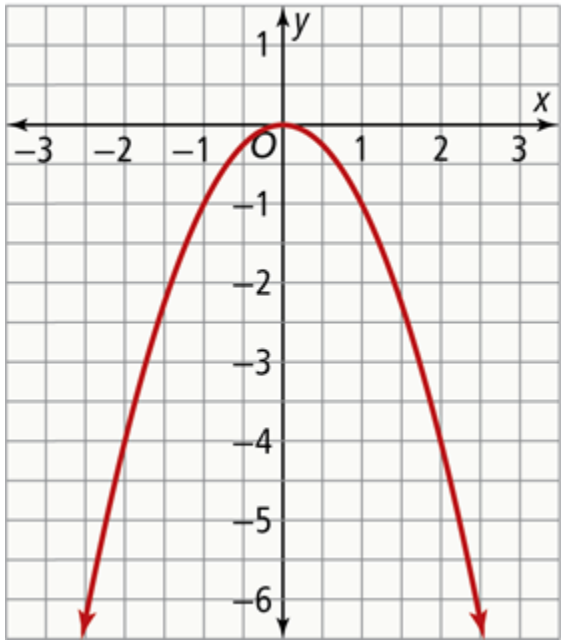
Slow Reveal Graph (4 of 4)

What do you notice? What do you wonder?









Slow Reveal Graph – Teacher Notes

Present each of the graphs to students one at a time, providing time to discuss each graph with a partner. Listen for students to observe that the shape of the graph remains the same as it is being translated. After graph 3 has been revealed ask students to describe what has happened to the parent function. Reveal graph 4 and ask students to compare the graph to the other three. G.GPE.2