

Name: _____

Quadratic Functions – Take-Home TIPS Assignment

The Alexander Hamilton Bridge in New York City spans 180 m over the Hudson River.

The height of the bridge 10 m in from the edge of the base is 8.5 m.

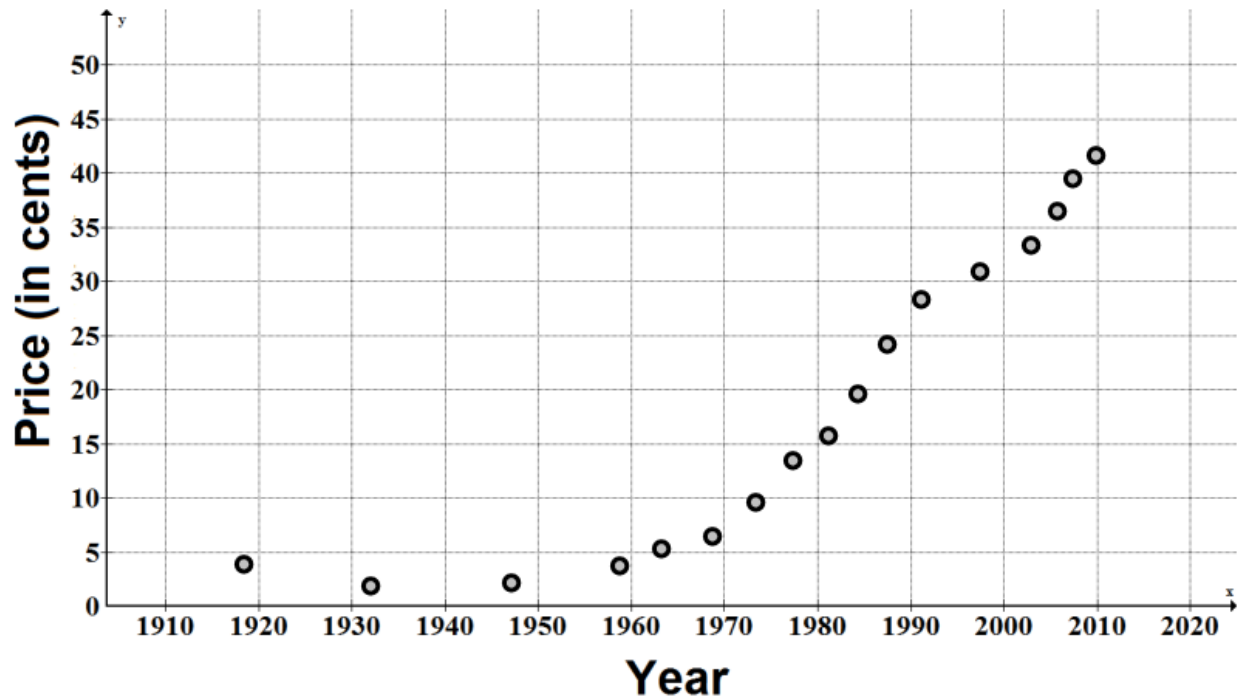
1. Determine an equation for the parabolic arc.
2. What is the height of the bridge above the water?
3. A container ship is making its way down the Hudson and is set to go under the Alexander Hamilton Bridge. If the ship is 37 m wide and 38 m tall, will it fit under the bridge?

Be sure to show and explain all of your work for the above questions!



Name: _____

Below is a scatter plot of stamp price over time.



1. Determine a quadratic equation to represent the price of stamps over time.
2. Use your equation to estimate the price of stamps in 2030.
Do you think this estimate is accurate? Why or why not?
3. Use your equation to estimate the price of stamps in 1800.
Does your answer make sense? Explain why or why not.
4. Use your equation to estimate when stamp prices will be 70 cents.

Be sure to show and explain all of your work for the above questions!