

Dream Scream Machine

NAME _____

It's your turn to be an engineer and design your own roller coaster! You may be as creative as you wish, but your data must reflect a rollercoaster that really could be built.

1. How many feet high is the tallest drop of your roller coaster (s)? _____
2. Write the function for your rollercoaster's height. Use $h = s - 16t^2$, where s is your answer to Question 1 (the tallest drop of your rollercoaster), t is the time, and h is the height of the rollercoaster.
3. Use the equation from Question 2 to create a table. Determine when the rollercoaster will be at the bottom of the drop.

TIME (SECONDS) (t)	HEIGHT ABOVE GROUND (FEET) (h)

4. On a blank piece of paper, draw your roller coaster. Make sure to include your rollercoaster's name and the table you created in Question 3. Identify how long the coaster falls on the tallest drop.