

Match the Thrill

NAME _____

While gathering safety information, engineers mixed up graphs from three different roller coasters. Your job is to help the engineers determine which data belongs to The Hurricane. The function for the height of The Hurricane versus time as it falls from its highest drop is

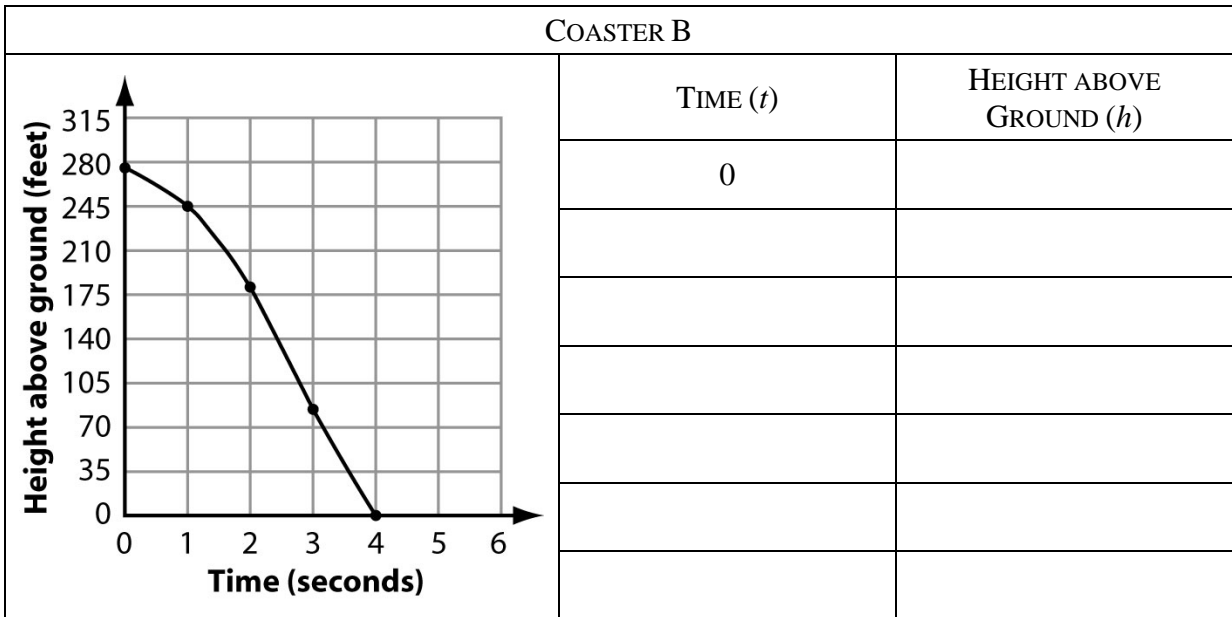
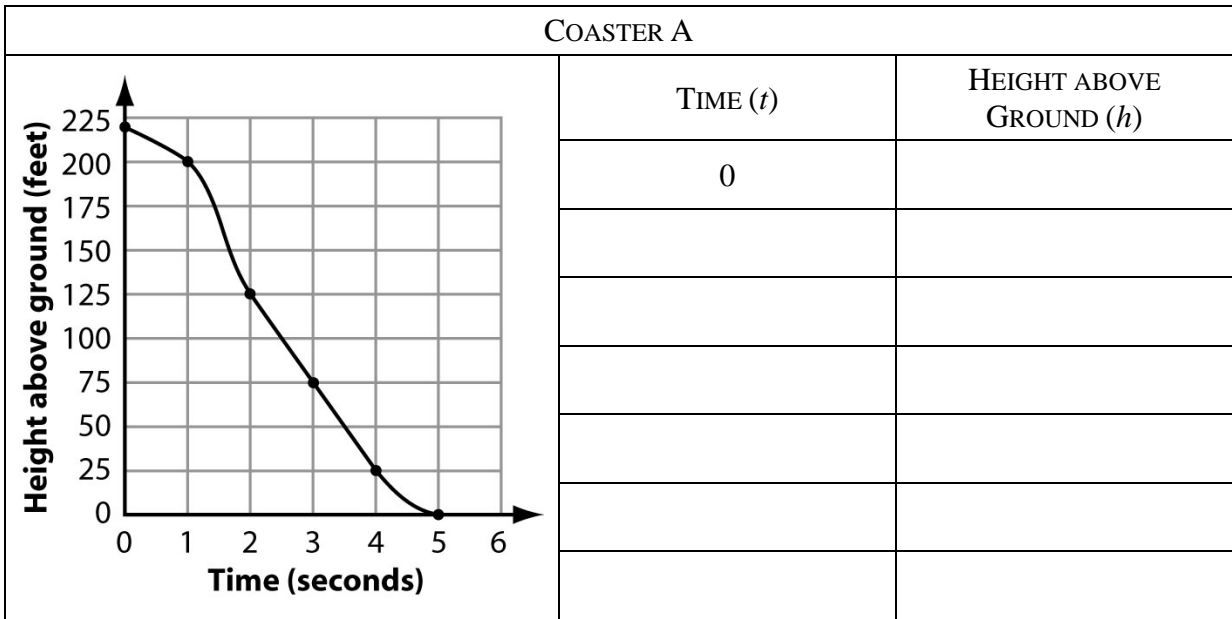
$$h = 256 - 16t^2$$

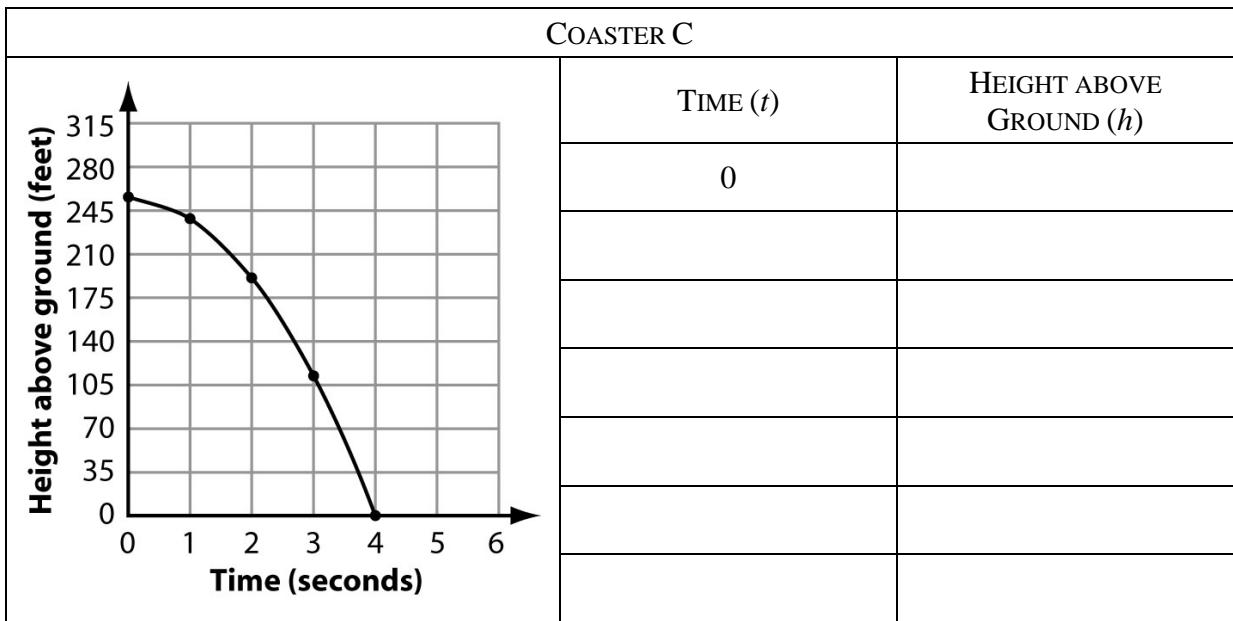
where h is the height (in feet) and t is the time (in seconds).

1. Use the function to complete the data table for the Hurricane.

TIME (t)	SUBSTITUTE INTO EQUATION	HEIGHT ABOVE GROUND (h)
0	$h = 256 - 16(0)^2$	

2. Complete a table of values for Coasters A, B, and C based on the graphs shown below. Determine which of the graphs represents the Hurricane.





3. Which graph represents the height vs. time of The Hurricane? Justify your answer.

4. According to your graph or table, how tall is The Hurricane? How do you know?

5. According to your graph or table, how long does it take for The Hurricane to reach the ground (that is, a height of 0 feet)?