

Air Coasters

To: Performance Analysis Chief
From: Design Team Manager

Luis, here is the data we collected on our last test run on the frictionless coaster. As usual, let's plot the velocity versus height.

The highest point in this test run was 60 meters, and the grid lines below are 5 meters apart. Velocities are in meters per second.

In order to compare the actual performance against what we predicted, the project physicist wants you to try to match the data to one of these equations, and let him know which has the closest match, and the value of "k."

$$v = \frac{k}{h}$$

$$v = k(60 - h)$$

$$v = k\sqrt{60 - h}$$

$$v = k(60 - h^2)$$

Have fun!

Tina

