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**Drop Bounce Height (ping pong ball)**

The purpose of this lab was to find the relationship between the height from where the ball was released to height where the ball is on the first bounce.

Equipment uses: 1 meter stick, 1 ping pong ball, 1 slow mo camera, tape.

Procedure: First, tape the meter stick to a flat wall. Second, have one person drop the ball, one hold the camera, and another person recording the data. Third, drop the ball from 6 different heights multiple times and record the data. Forth, watch the slow mo footage to find out how high the ball bounced. Fifth create a graph and fill out a chart using your data and draw a line of best fit.

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| --- | --- | --- | --- | --- | --- |
|  | drop height | bounce height(1st) | bounce height(2nd) | bounce height(3rd) | average of bounce ht. |
| trial 1 | 15cm | 8cm | 9cm | 6cm | 7.66cm |
| trial 2 | 30cm | 17cm | 24cm | 20cm | 20.33cm |
| trail 3 | 45cm | 20cm | 31cm | 33cm | 28cm |
| trial 4 | 60cm | 42cm | 40cm | 43cm | 41.666cm |
| trial 5 | 75cm | 50cm | 51cm | 53cm | 51.333cm |
| trial 6 | 90cm | 60cm | 61cm | 59cm | 60cm |

Conclusion: I learned that no matter how high you drop the ball there is no way for the ball to bounce and be at the original starting point again. I also observed that the higher you drop the ball the higher the ball will bounce because of gravity having more time to accelerate the ball creating a larger bounce.