



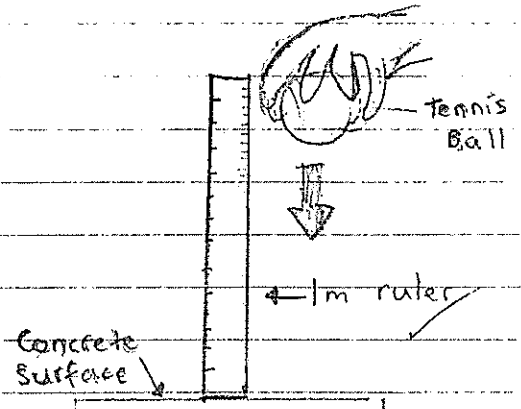
# TENNIS BALL BOUNCE

Aim: To see if the bounce height of the tennis ball is affected by the height we drop it from. ✓

Hypothesis: I think that when we drop the tennis ball from higher up, it will bounce back higher. ✓

Equipment:

- Tennis Ball (Legend sports)
- 1 metre ruler
- Paper
- Flat concrete surface
- Pen or pencil

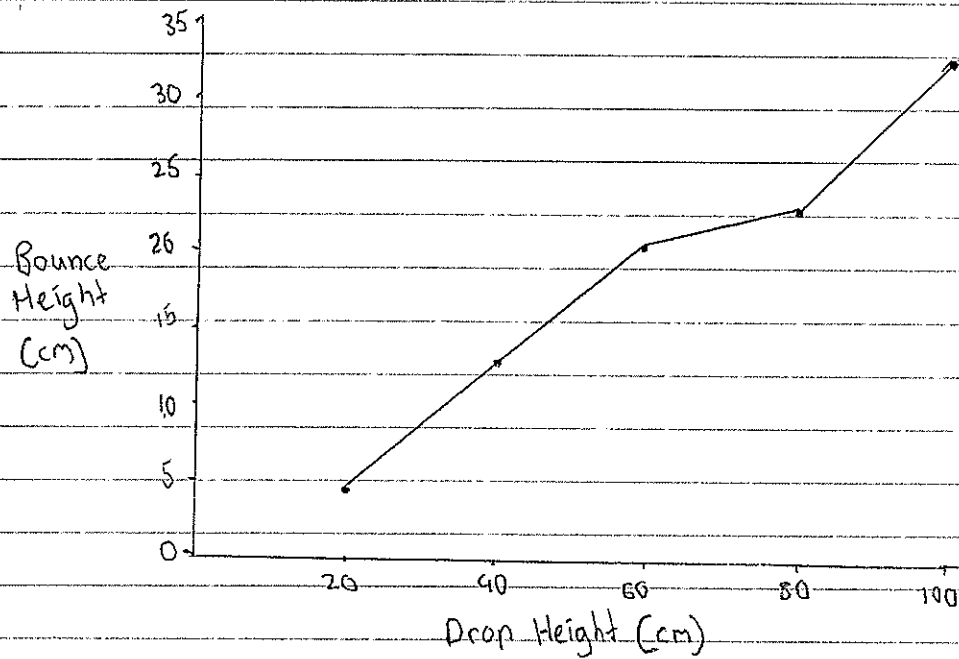


Procedure:

- 1) Gather all of the necessary equipment. (see equipment section)
- 2) Find a flat concrete surface to conduct experiment on.
- 3) Stand ruler up straight and hold the tennis ball<sup>r</sup> up at the 20cm mark so that the bottom of the ball is on the 20cm mark
- 4) Drop the ball without applying any force and measure where the bottom of the ball bounces back on the first bounce.
- 5) Repeat until you have completed three separate trials.
- 6) Record how high the ball bounced back in a table.
- 7) Repeat steps three to six by dropping the ball from 40cm, 60cm, 80cm and 100cm
- 8) Average all of the measurements and place them in your table

BOUNCE HEIGHT OF A TENNIS BALL				
HEIGHT OF BALL DROP (cm)	BOUNCE HEIGHT (cm)			AVERAGE (cm)
	T1	T2	T3	
20cm	4	4.5	5	4.5cm
40cm	12.5	13.5	14	13.34cm
60cm	20	21	21	20.67cm
80cm	22	23	25	23.34cm
100cm	32	34	35	33.67cm

## BOUNCE HEIGHT OF A TENNIS BALL



Discussion: After recording the results in a table, it is clearly shown that if you increase the height you drop the ball from, the higher the ball will bounce. We can also see that if we kept on increasing the drop height, it will constantly bounce higher. The results we achieved from this experiment, answer our aim perfectly. During the course of this experiment, there were a few factors that might have caused errors. The first one of these was the fact that we had to use our naked eye to see how high the ball bounced up to. Because of this we weren't able to get a completely accurate measurement. Another factor that we had which caused us trouble was that the tennis ball we used wasn't in great condition. To improve our experiment, we could've used a higher quality tennis ball. To solve the problem of not being able to get a completely accurate measurement, we could have done extra trials.

Conclusion: After conducting this experiment, we found that when you drop a tennis ball from an increased height, the ball will bounce back up higher. We also saw that the results from this experiment clearly show that if we increase the drop height even more, the ball will continue to bounce back higher. Overall, these results prove that my hypothesis is correct. ✓

AMAZING!