

# Bouncing soccer balls

This task is about conducting a fair test.

Anaru was a helper at his school's soccer tournament. To find a ball to use in the tournament, he had to decide which make of soccer ball would bounce the best. Anaru did a small experiment. He tested five different types of ball by getting different people from his class to drop a make of soccer ball from above their head. Below are the results of Anaru's experiment.



Make of soccer ball	How high the ball bounced (measured in metres)
Shooter	1.6 m, 1.8 m, 1.6 m
Topflight	2.0 m
Goalgetter	2.1 m, 2.2 m, 2.2 m, 2.3 m
Striker	1.4 m, 1.3 m
Demon	2.3 m

Which make of soccer ball do you think Anaru should use for the soccer tournament?

a)i)

\_\_\_\_\_ Why did you choose this make?

ii) \_\_\_\_\_  
\_\_\_\_\_

b) One of the other players said that Anaru's experiment wasn't a 'fair test'.

Give **two** ways that Anaru's test wasn't a 'fair test'.

i) \_\_\_\_\_

ii) \_\_\_\_\_

Anaru did another experiment which looked at the weight of some other soccer balls and how high they bounced. Below are the results of this experiment.

Make of ball	Weight of ball (grams)	Average height of how high the ball bounced (metres)
Gamebreaker	450 g	1.2 m
Sharpshooter	410 g	1.5 m
Swift	430 g	1.3 m

c) Write a general sentence about the weight of a soccer ball and how high it bounces.

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