

# Trend Task: Balls

Approach: One to one

Year: 4 & 8

Focus: Estimating weights

Resources: Pink foam ball, silver petanque ball, yellow tennis ball, orange cricket ball, recording book

## Questions / instructions:

Here are four different balls. I want you to tell me how much you think each one would weigh.

Before you tell me, have a hold of each ball to get an idea of how heavy each one is.

**Give the four balls to the student.**



Now I want you to tell me how much you think each ball weighs. You need to tell me the unit of measurement, like grams or kilograms.

**As each answer is given, write it on the recording sheet, ensuring that the units of measurement as given by the student are recorded.**

1. How much do you think the pink foam ball weighs?

**Record student answer.**

**Accepted** (*actual = 12g*): 6 – 24g 9 (8) 23 (20)  
 < 6g 45 41  
 > 24g 32 29  
 any other response 14 7

**Unit given:** grams 54 84  
 any other response 46 16

2. How much do you think the yellow tennis ball weighs?

**Record student answer.**

**Accepted** (*actual = 58g*): 29 – 116g 7 (6) 30 (22)  
 < 29g 51 38  
 > 116g 34 27  
 any other response 8 5

**Unit given:** grams 54 82  
 any other response 46 18

3. How much do you think the orange cricket ball weighs?

**Record student answer.**

**Accepted** (*actual = 164g*): 82 – 328g 3 (3) 21 (13)  
 < 82g 49 39  
 > 328g 40 36  
 any other response 9 4

**Unit given:** grams 47 74  
 any other response 53 26

4. How much do you think the silver petanque ball weighs?

**Record student answer.**

**Accepted** (*actual = 726g*): 363 – 1452g 15 (12) 34 (31)  
 < 363g 25 18  
 > 1452g or 1.452kg 51 41  
 any other response 10 6

**Unit given:** kilograms 61 60  
 grams 30 34  
 any other response 9 6

**Ball weights:**

weights in increasing sequence 75 (79) 92 (92)  
 any other response 25 (21) 8 (8)

**Total score:** 8–9 2 (2) 13 (11)  
 6–7 13 (13) 37 (31)  
 4–5 35 (36) 31 (39)  
 2–3 38 (39) 13 (15)  
 0–1 11 (10) 5 (3)

## Commentary:

This was a difficult task for all students. Although progress was seen from year 4 to year 8, at most, one third of the students estimated the weight with much accuracy. Moderate improvement was seen in year 8 from 2001 to 2005.