

Measuring mass and volume accurately

Grade 6 science (Year 7 · Class 6) · Test

Name: _____ Date: _____ Class: _____ Mark: ____ / 20

This test checks units, instruments and displacement. Show your working for each calculation and include units. Answer all questions. You have 45 minutes and the total is 20 marks.

Level: Grade 6 science (Year 7 · Class 6) · **Curriculum:** SEP measurement

Time: 45 minutes · 8 questions · Total: 20 marks · Calculator allowed

Question 1 Convert units (2 marks)

- Convert 3.2 kg to grams. (1 mark)
- Convert 750 mL to litres. (1 mark)

Question 2 Read the cylinder (3 marks)

Use the figure.

- State the value of one small division. (1 mark)
- Read the volume of water. (1 mark)
- State which part of the meniscus is read. (1 mark)



The cylinder for Question 2.

Question 3 Eye level (2 marks)

Explain why you must keep your eye level with the water surface when you read a cylinder.

Question 4 Volume of a key (3 marks)

Mei lowers a metal key into a cylinder. The level rises from 35 mL to 42 mL.

- Calculate the volume of the key in cm^3 . (1 mark)
- Convert this volume to litres. (1 mark)
- Explain why a ruler is not suitable for finding this volume. (1 mark)

Question 5 Water in a beaker (2 marks)

A beaker has a mass of 62.5 g. With water in it, the balance reads 187.5 g.

- Calculate the mass of the water. (1 mark)
- State what the display shows if the beaker is tared before the water is added. (1 mark)

Question 6 Kitchen amounts (3 marks)

Wanjiru has a 2 kg bag of flour and uses 650 g. She also has 5 L of water and fills cups of 600 mL.

- Calculate the flour left, in kilograms. (1 mark)
- Calculate how many full cups she can fill. (1 mark)
- Calculate the water left over, in mL. (1 mark)

Question 7 Choosing a cylinder (2 marks)

Aarav must measure 6 mL. Choose between a 10 mL cylinder and a 100 mL cylinder and justify your choice.

Question 8 Floating cork (3 marks)

A cork floats on water. A sinker alone raises the level from 30 mL to 38 mL. The sinker and cork together raise it to 50 mL.

- Explain why a sinker is needed. (1 mark)
- Calculate the volume of the cork. (2 marks)