

Zoom In Maths Literacy Grade 12

Worksheet 1 Mass

1. There are 65 students in a hostel. To make dinner, the cook needs one potato, with a mass of at least 120 g, per person.
 - 1.1 Calculate how many kilograms of potatoes the cook should buy. (3)
 - 1.2 Determine how many 7-kg pockets of potatoes the cook should buy. Briefly explain your answer. (2)
 - 1.3 Determine the cost per kilogram as well as the cost per person, if a 7-kg pocket of potatoes sells for R76,76. (5)

[10]
 2. During September 2017 people in Vereeniging, South Africa, used 6 370 fairy cakes to build a tower that earned them a place in the Guinness Book of World Records 2017. The fairy cake tower weighed 1,2 tonnes and was 10,77 m high.
 - 2.1 Determine the mass of one fairy cake to the nearest gram. (4)
 - 2.2 According to the recipe, you need 615 g of self-raising flour to make a batch of 36 fairy cakes. Calculate the weight in kilograms of the self-raising flour used to bake the 6 370 cakes for the tower. (4)
 - 2.3 Determine how many kilolitres of milk were used, if 180 mL of milk is needed to make one dozen fairy cakes. (4)

[12]
 3. In the German city of Duisburg 19 sculptors spent 25 days to build a sandcastle that was 54,72 feet tall, using 3,860 US tons of sand. The sandcastle was officially recognised by Guinness World Records as the tallest sandcastle in the world.
Use the conversion factors: 1 US ton = 0,907185 metric tonne
1 US foot = 0,3048 m
 - 3.1 Determine the height of the sandcastle in metres. (2)
 - 3.2 Convert the mass of the sand to kilograms. (3)
 - 3.3 The sandcastle was completed on 3 September 2017. Determine the date on which they started to build it. (3)

[8]
- Total = 30 marks**

Worksheet 2 Capacity, temperature and time

1. On 23 May 2017, two ragged-tooth sharks were removed from the Two Oceans aquarium and released offshore near Mossel Bay the next day. The sharks were transported in a 6-kilolitre holding tank.
 - 1.1 Convert the capacity of the tank to millilitres. (2)
 - 1.2 Convert the capacity of the tank to cubic centimetres using the factor $1\ 000\ \text{cm}^3 = 1\ \text{L}$. (3)
 - 1.3 The temperature of the water in the tank needed to be kept at a minimum of $20\ ^\circ\text{C}$. Convert the temperature to $^\circ\text{F}$ using the formula: $(^\circ\text{F} - 32) \div 1,8 = ^\circ\text{C}$ (5)

[10]
 2. Sunette Viljoen, the South African record holder for women's javelin, was born on 6 October 1983. She set the South African record for juniors in 2002 with a throw of 58,33 m. On 13 October 2003 she burst onto the international athletic scene with a throw of 51,68 m in Abuja. In 2012 she improved the South African record for women to 69,35 m.
 - 2.1 Give Sunette's age when she competed in Abuja. Your answer must be in years, months and days. (5)
 - 2.2 What is the difference, in years, between Sunette's ages when she set the junior and senior South African records? (2)
 - 2.3 Determine the difference, in centimetres, between her junior and senior South African records. (3)

[10]
- Total = 20 marks**