WONDERLEARNERZ PRIMARY ACADEMY â€" OFFICIAL ANSWER KEY & MARKING SCHEME

Weight and Mass: Worksheet 3 [ANSWER KEY]

Grade 5 | Mathematics | Ch 13: Weight and Mass | Total Marks: 19 | Time: 45 Minutes

Q1. Convert 12 kilograms into grams. [1 Mark]

Correct Answer: 12,000 g

Explanation: 1 kg = 1,000 g. 12 x 1,000 = 12,000 grams.

Q2. How many kilograms and grams are in 6,450 grams? [1 Mark]

Correct Answer: 6 kg 450 g

Explanation: 6,450 g = 6,000 g + 450 g = 6 kg 450 g.

Q3. What is 3.75 kg expressed in grams? [1 Mark]

Correct Answer: 3,750 g

Explanation: 3.75 x 1,000 = 3,750 g.

Q4. Which item is most realistically estimated to weigh approximately 1 kilogram? [1 Mark]

Correct Answer: A 1-liter bag of sugar

Explanation: A standard bag of flour or sugar weighs about 1 kilogram.

Q5. At the Harbor Marine Terminal, an animal shelter receives 3 bags of dog food weighing 15 kg each and 4 bags of cat food weighing 5 kg each. What is the total mass of pet food received? [1 Mark]

Correct Answer: 65 kg

Explanation: (3 x 15 kg = 45 kg) + (4 x 5 kg = 20 kg) = 65 kg.

Q6. A shipping parcel has a gross weight of 4 kg 250 g. The cardboard packaging weighs 450 g. What is the net mass of the contents inside? [1 Mark]

Correct Answer: 3 kg 800 g

Explanation: 4,250 g - 450 g = 3,800 g = 3 kg 800 g.

Q7. A baker uses 650 g of flour for one loaf of artisan bread. How much flour (in kilograms and grams) is required to bake 6 loaves? [1 Mark]

Correct Answer: 3 kg 900 g

Explanation: 650 g x 6 = 3,900 g = 3 kg 900 g.

Q8. Complete the mass conversion: 8 kg 75 g = [?] grams. [1 Mark]

Correct Answer: 8,075

Explanation: 8 x 1,000 + 75 = 8,075 grams.

Q9. Find the missing balance weight: [?] g + 1,450 g = 3,000 g. [1 Mark]

Correct Answer: 1,550

Explanation: 3,000 - 1,450 = 1,550 g.

Q10. A student writes: '2 kg 5 g = 2,500 g.' Identify the error and state the correct mass in grams. [1 Mark]

Correct Answer: 2,005 g

Explanation: The student confused 5 g with 500 g. 2 kg = 2,000 g, so 2,000 + 5 = 2,005 g.

Q11. A clerk calculates 5,040 g as 50 kg 40 g. Correct the clerk's conversion. [1 Mark]

Correct Answer: 5 kg 40 g

Explanation: 5,000 g is 5 kg, not 50 kg. 5,040 g = 5 kg 40 g.

Q12. Explain the difference between gross weight, tare weight, and net weight using an example of a jar of strawberry jam. [2 Marks]

Correct Answer: Gross weight is the total mass of jar plus jam. Tare weight is the empty glass jar alone. Net weight is the mass of the jam alone (Gross - Tare = Net).

Explanation: Net weight represents the usable product mass excluding packaging tare.

Q13. Why is mass measured in kilograms and grams independent of gravity, unlike weight measured in newtons? **[2 Marks]**

Correct Answer: Mass is the fundamental quantity of matter inside an object, which stays the same whether on Earth, the Moon, or in deep space.

Explanation: Mass is an invariant scalar quantity representing amount of matter.

Q14. A balance scale has 3 identical mystery steel balls and a 200 g weight on the left pan, and a 1 kg weight and a 100 g weight on the right pan. If the scale balances evenly, what is the mass of one steel ball? **[2 Marks]**

Correct Answer: 300 g

Explanation: Right pan = 1,100 g. Left pan = 3 balls + 200 g. 3 balls = 1,100 - 200 = 900 g. One ball = 900 / 3 = 300 g.

Q15. A warehouse elevator has a safe load limit of 1.2 metric tons (1,200 kg). If 15 workers averaging 72 kg each enter the elevator, how much additional cargo mass can safely be loaded? **[2 Marks]**

Correct Answer: 120 kg

Explanation: Workers mass = 15 x 72 = 1,080 kg. Remaining capacity = 1,200 - 1,080 = 120 kg.