Addition and subtraction in Measures of Mass

Understanding Notes

- Mass means the weight of an object

- Standard units of mass are gram (g) and kilogram (kg)

- 1 kilogram = 1000 grams

- While adding or subtracting, make sure both masses are in the same unit

- If needed, convert grams to kilograms or vice versa

- Add or subtract kilograms and grams separately

- If grams become 1000 or more, convert to kilograms

- While subtracting, borrow 1 kg = 1000 g if needed

Example: (Easy – Addition in grams)

A packet of sugar weighs 250 g. Another packet weighs 300 g.

What is the total weight?

- ✓ 250 g + 300 g = 550 g

Answer = 550 g

Example: (Easy – Subtraction in kilograms)

A watermelon weighs 8 kg. 3 kg is cut from it. What is the remaining weight?

- ✓ 8 kg – 3 kg = 5 kg

Answer = 5 kg

Example: (Moderate – Mixed unit addition)

A bag of rice weighs 3 kg 500 g. Another bag weighs 2 kg 700 g.

- ✓ Add kilograms = 3 + 2 = 5 kg

- ✓ Add grams = 500 + 700 = 1200 g

- ✓ 1200 g = 1 kg 200 g

- ✓ Total = 5 kg + 1 kg 200 g = 6 kg 200 g

Answer = 6 kg 200 g

Example: (Moderate – Mixed unit subtraction with borrowing)

A box weighs 7 kg 200 g. 4 kg 500 g of items are removed.

- ✓ 200 – 500 not possible, borrow 1 kg = 1000 g
- ✓ Now 6 kg and 1200 g
- ✓ Grams = 1200 – 500 = 700 g
- ✓ Kilograms = 6 – 4 = 2 kg
- ✓ Remaining weight = 2 kg 700 g

Example 5 (Moderate – Convert before solving)

A sack weighs 2500 g. Another weighs 2 kg 300 g.

- ✓ Convert 2500 g = 2 kg 500 g
- ✓ Add: 2 kg 500 g + 2 kg 300 g =
- ✓ Kilograms = 2 + 2 = 4 kg
- ✓ Grams = 500 + 300 = 800 g

Answer = 4 kg 800 g

Summary Points

- Mass is measured in grams (g) and kilograms (kg).
- 1 kg = 1000 g.
- Use same units before adding or subtracting.
- Convert grams if they become 1000 or more after addition.
- Borrow 1 kg = 1000 g during subtraction when needed.
- Write answers clearly in kg and g format.