

UNIT 3:

Measuring mass

Exercise 3

1. $2 \text{ kg} \div 1\,000 = 0,002 \text{ t}$
2. $5\,000 \text{ g} \div 1\,000 = 5 \text{ kg}$
3. $650 \text{ g} \times 1\,000 = 650\,000 \text{ mg}$
4. $50 \text{ t} \times 1\,000 = 50\,000 \text{ kg}$
 $\therefore 50\,000 \text{ kg} \times 1\,000 = 50\,000\,000 \text{ g}$
5. $8 \text{ g} \div 1\,000 = 0,008 \text{ kg}$
6. $0,001 \text{ kg} \times 1\,000 = 1 \text{ g}$
7. $4,2 \text{ t} \times 1\,000 = 4\,200 \text{ kg}$
8. $3,1 \text{ mg} \div 1\,000 = 0,0031 \text{ g}$
9. $6,21 \text{ g} \div 1\,000 = 0,00621 \text{ kg}$
 $\therefore 0,00621 \text{ kg} \div 1\,000 = 0,00000621 \text{ t}$
10. $82,7 \text{ mg} \div 1\,000 = 0,0827 \text{ g}$
 $\therefore 0,0827 \text{ g} \div 1\,000 = 0,0000827 \text{ kg}$

Exercise 4

1. Mass of sugar = $300 \text{ g} \times 4,5 \text{ batches} = 1\,350 \text{ g}$
 $\therefore 1\,350 \text{ g} \div 1\,000 = 1,35 \text{ kg}$
2. R11,99 per kilogram
 $\therefore 1 \text{ kg} \times 1\,000 = 1\,000 \text{ g}$
 $\therefore \text{R}11,99 \div 1\,000 \text{ g} = \text{R}0,01199 \text{ per gram}$
 $\approx \text{R}0,01/\text{g}$
3. Item A: $3\,456 \text{ mg} \div 1\,000 = 3,456 \text{ g}$
 Item B: $0,002 \text{ kg} \times 1\,000 = 2 \text{ g}$
 Item C: $1,345 \text{ g}$
 \therefore Item A is the heaviest item.

Test Your Understanding

- 1.1 $4 \text{ kg} \times 1\,000 = 4\,000 \text{ g}$
2. $8,67 \text{ mg} \div 1\,000 = 0,00867 \text{ kg}$
 $\therefore 0,00867 \text{ g} \div 1\,000 = 0,00000867 \text{ kg}$
3. $35 \text{ t} \times 1\,000 = 35\,000 \text{ kg}$
 $\therefore 35\,000 \text{ kg} \times 1\,000 = 35\,000\,000 \text{ g}$
- 4.1 $2\,300 \text{ g} \div 1\,000 = 2,3 \text{ kg}$
 $\therefore \text{Cost} = \text{R}8,99 \times 2,3 \text{ kg} = \text{R}20,677 \approx \text{R}20,68$
- 4.2 $\text{Weight} = \text{R}15 \div 8,99 \text{ R/kg} = 1,67 \text{ kg}$
- 5.1 Flour = $0,8 \text{ kg}$
 Sugar = $650 \text{ g} \div 1\,000 = 0,65 \text{ kg}$
 Butter = $900\,000 \text{ mg} \div 1\,000 = 900 \text{ g}$
 $\therefore 900 \text{ g} \div 1\,000 = 0,9 \text{ kg}$
 $\therefore \text{Total mass} = 0,8 + 0,65 + 0,9 = 2,35 \text{ kg}$
- 5.2 $\frac{1}{2} \text{ kg} = 0,5 \text{ kg}$
 Butter needed = $0,9 \text{ kg}$ (see Ans. Q 5.1)
 \therefore You won't have enough butter
- 5.3 No. of bags of sugar = $650 \text{ g} \div 150 \text{ g}$
 $= 4,33 \approx 5 \text{ bags}$
 $\therefore \text{Total cost} = 5 \text{ bags} \times \text{R}5,95 = \text{R}29,75$
6. Weight of baggage = $103 \text{ kg} - 65 \text{ kg} = 38 \text{ kg}$
 \therefore You need to remove items as the weight allowance is only 35 kg