# Chapter 8: Weight and Capacity

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## Exercise 8.1 — Check! Check! — Correct/Incorrect Weight Estimates (p. 104)

Q1 Anu has recorded the weights of items in her house. Put a tick if the weight looks correct.

1. Iron Almirah – 40 g
2. Bed – 60 kg
3. Rice Bag – 5 kg
4. Sofa – 30 g
5. Bucket – 1 kg 800 g
6. Water Bottle – 650 g
7. Refrigerator – 50 g

Which ones are correct?

SOLUTION

Check each item against everyday experience:

1. Iron Almirah – 40 g: WRONG. A steel cupboard weighs about 40 kg, not 40 g (a paper clip is about 1 g).
2. Bed – 60 kg: CORRECT. A wooden bed typically weighs 40–80 kg.
3. Rice Bag – 5 kg: CORRECT. Standard rice bags are 5 kg or 10 kg.
4. Sofa – 30 g: WRONG. A sofa weighs about 30 kg, not 30 g.
5. Bucket – 1 kg 800 g: CORRECT. A full plastic bucket can weigh about 1 kg 800 g.
6. Water Bottle – 650 g: CORRECT. A 500 ml bottle with water weighs about 650 g.
7. Refrigerator – 50 g: WRONG. A refrigerator weighs about 50 kg, not 50 g.

Answer: Correct entries: 2 (Bed – 60 kg), 3 (Rice Bag – 5 kg), 5 (Bucket – 1 kg 800 g), 6 (Water Bottle – 650 g). Items 1, 4, 7 are wrong — grams should be kilograms.

## Exercise 8.2 — Let Us Do — Reading Weighing Scales (p. 104)

Q1 Read the scales and write the correct weight.
(a) Circular scale (0–4 kg range) — answer in g
(b) Circular scale (0–2 kg range) — answer in kg and g
(c) Circular scale (0–6 kg range) — answer in kg and g
(d) Circular scale (0–4 kg range) — answer in kg and g
(e) Fine circular scale (0–1 kg / 0–1000 g range) — answer in g
(f) Fine circular scale (0–1 kg / 0–1000 g range) — answer in g

SOLUTION

Read the pointer position on each scale:

(a) Scale 0–4 kg. The needle points to 600 g = 600 g.
(b) Scale 0–2 kg. The needle points between 1 kg and 2 kg = 1 kg 800 g.
(c) Scale 0–6 kg. The needle points between 2 kg and 3 kg = 2 kg 500 g.
(d) Scale 0–4 kg. The needle points between 2 kg and 3 kg = 2 kg 600 g.
(e) Fine scale 0–1,000 g. The needle points between 0 and 250 g = 150 g.
(f) Fine scale 0–1,000 g. The needle points between 500 g and 750 g = 600 g.

Answer: (a) 600 g (b) 1 kg 800 g (c) 2 kg 500 g (d) 2 kg 600 g (e) 150 g (f) 600 g

## Exercise 8.3 — Different Units but Same Measure — kg and g Matching + Double Number Line (p. 105)

Q1 Match the bags that have the same weights.
Weighing Balance 1 (in kg): 5 kg, 10 kg, 3 kg, 6 kg, 25 kg, 30 kg
Weighing Balance 2 (in g): 3,000 g, 6,000 g, 10,000 g, 30,000 g, 5,000 g, 25,000 g

SOLUTION

Use the rule: 1 kg = 1,000 g, so multiply kg by 1,000 to get g.

5 kg = 5,000 g → matches 5,000 g
10 kg = 10,000 g → matches 10,000 g
3 kg = 3,000 g → matches 3,000 g
6 kg = 6,000 g → matches 6,000 g
25 kg = 25,000 g → matches 25,000 g
30 kg = 30,000 g → matches 30,000 g

Answer: 5 kg ↔ 5,000 g | 10 kg ↔ 10,000 g | 3 kg ↔ 3,000 g | 6 kg ↔ 6,000 g | 25 kg ↔ 25,000 g | 30 kg ↔ 30,000 g

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Q2 Fill in the missing values on the double number line.
kg: 1, 3, 8, ___, 20, ___, 30
g: 1,000, ___, ___, 15,000, ___, 25,000, ___
Also, what is the multiplying factor from kg to g (shown as x___ in the circle)?

SOLUTION

Rule: 1 kg = 1,000 g, so g = kg x 1,000.

Fill in kg side: 1, 3, 8, 15, 20, 25, 30
Fill in g side: 1,000, 3,000, 8,000, 15,000, 20,000, 25,000, 30,000

Missing kg values: 15 (since 15,000 g / 1,000 = 15 kg) and 25 (since 25,000 g / 1,000 = 25 kg).
Missing g values: 3,000 (3 kg), 8,000 (8 kg), 20,000 (20 kg), 30,000 (30 kg).

Multiplying factor: x 1,000 (kg to g).

Answer: Missing kg: 15 and 25. Missing g: 3,000; 8,000; 20,000; 30,000. Factor = x 1,000.

## Exercise 8.4 — Let Us Find — kg to g Conversions (p. 106)

**Q1** Shamim thinks 5 kg 50 g = 5,050 g. Rehan thinks it is 5,500 g. Who is right and why?

SOLUTION

5 kg = 5 x 1,000 g = 5,000 g.
5 kg 50 g = 5,000 g + 50 g = 5,050 g.

Rehan's mistake: he wrote 500 g instead of 50 g, giving 5,500 g.
Shamim is correct.

Answer: Shamim is correct. 5 kg 50 g = 5,000 + 50 = 5,050 g. Rehan confused 50 g with 500 g.

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**Q2** Complete the conversions by filling in the blanks.
(a) 7 kg 67 g = ___ g
(b) 3 kg 300 g = ___ g
(c) 8 kg 69 g = ___ g
(d) 10,760 g = ___ kg ___ g
(e) 4,080 g = ___ kg ___ g
(f) 12,042 g = ___ kg ___ g

SOLUTION

(a) 7 kg 67 g: 7 x 1,000 + 67 = 7,000 + 67 = 7,067 g.
(b) 3 kg 300 g: 3 x 1,000 + 300 = 3,000 + 300 = 3,300 g.
(c) 8 kg 69 g: 8 x 1,000 + 69 = 8,000 + 69 = 8,069 g.
(d) 10,760 g: 10,760 / 1,000 = 10 remainder 760 → 10 kg 760 g.
(e) 4,080 g: 4,080 / 1,000 = 4 remainder 80 → 4 kg 80 g.
(f) 12,042 g: 12,042 / 1,000 = 12 remainder 42 → 12 kg 42 g.

Answer: (a) 7,067 g (b) 3,300 g (c) 8,069 g (d) 10 kg 760 g (e) 4 kg 80 g (f) 12 kg 42 g

## Exercise 8.5 — Comparison between Different Weights (p. 107)

**Q1** Harpreet's family carried these fruits on a picnic:
Watermelon – 3 kg, Pineapple – 1 kg 750 g, Apples – 1 kg 250 g, Mangoes – 2 kg
(a) Which fruit has the highest weight?
(b) Which fruit has the least weight?
(c) Arrange the items in descending order of weight.

SOLUTION

Convert everything to grams for easy comparison:
Watermelon = 3,000 g
Pineapple = 1,000 + 750 = 1,750 g
Apples = 1,000 + 250 = 1,250 g
Mangoes = 2,000 g

(a) Highest weight: Watermelon (3,000 g).
(b) Least weight: Apples (1,250 g).
(c) Descending order: Watermelon (3 kg) > Mangoes (2 kg) > Pineapple (1 kg 750 g) > Apples (1 kg 250 g).

**Answer: (a) Watermelon (b) Apples (c) Watermelon > Mangoes > Pineapple > Apples**

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**Q2** Compare the weights using <, =, > signs.
(a) 1 kg 600 g ___ 1,700 g
(b) 1 kg 600 g ___ 1 kg 60 g
(c) 10 kg 35 g ___ 10,035 g
(d) 1 kg 600 g ___ 2 kg 500 g
(e) 5 kg 50 g ___ 4 kg 500 g
(f) 900 g + 7,000 g ___ 7 kg + 900 g

SOLUTION

Convert to grams and compare:

(a) 1 kg 600 g = 1,600 g; compare with 1,700 g. 1,600 < 1,700 → <
(b) 1 kg 600 g = 1,600 g; 1 kg 60 g = 1,060 g. 1,600 > 1,060 → >
(c) 10 kg 35 g = 10,035 g; compare with 10,035 g. Equal → =
(d) 1 kg 600 g = 1,600 g; 2 kg 500 g = 2,500 g. 1,600 < 2,500 → <
(e) 5 kg 50 g = 5,050 g; 4 kg 500 g = 4,500 g. 5,050 > 4,500 → >
(f) 900 g + 7,000 g = 7,900 g; 7 kg + 900 g = 7,000 + 900 = 7,900 g. Equal → =

**Answer: (a) < (b) > (c) = (d) < (e) > (f) =**

## Exercise 8.6 — Let Us Find — Milligram Conversions (p. 108)

**Q1** If a sugar sachet weighs 5 g, how much will it be in milligrams?

SOLUTION

1 g = 1,000 mg.
5 g = 5 x 1,000 = 5,000 mg.

Answer: 5,000 mg

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**Q2** Complete the double number line.
mg: 1,000, ___, 12,000, 20,000, ___, 31,000
g: 1, ___, 12, ___, 25, ___

SOLUTION

Rule: 1 g = 1,000 mg, so mg = g x 1,000.

mg side: 1,000; 5,000; 12,000; 20,000; 25,000; 31,000
g side: 1; 5; 12; 20; 25; 31

Missing mg: 5,000 (for 5 g) and 25,000 (for 25 g).
Missing g: 5 g (for 5,000 mg) and 20 g (for 20,000 mg) and 31 g (for 31,000 mg).

Answer: Missing mg: 5,000 and 25,000. Missing g: 5, 20, and 31.

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**Q3** An ornament weighs 4 g 100 mg. What will be the weight in milligrams?

SOLUTION

4 g = 4 x 1,000 mg = 4,000 mg.
4 g 100 mg = 4,000 + 100 = 4,100 mg.

Answer: 4,100 mg

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**Q4** A goldsmith has made an ornament weighing 10 g 500 mg. What will its weight be in milligrams?

SOLUTION

10 g = 10 x 1,000 mg = 10,000 mg.
10 g 500 mg = 10,000 + 500 = 10,500 mg.

Answer: 10,500 mg

Q5 Compare the weights using <, =, > signs.
(a) 20 g ___ 200 mg
(b) 16 g 50 mg ___ 50 g 16 mg
(c) 2,010 mg ___ 2 g 100 mg
(d) 9,000 mg ___ 90 g
(e) 5,000 g ___ 7,500 g
(f) 800 mg + 88 mg ___ 880 mg + 8 mg

SOLUTION

Convert to the same unit and compare:

(a) 20 g = 20,000 mg; compare 20,000 mg with 200 mg. 20,000 > 200 → >
(b) 16 g 50 mg = 16,050 mg; 50 g 16 mg = 50,016 mg. 16,050 < 50,016 → <
(c) 2,010 mg; 2 g 100 mg = 2,100 mg. 2,010 < 2,100 → <
(d) 9,000 mg = 9 g; compare with 90 g. 9 g < 90 g → <
(e) 5,000 g vs 7,500 g. 5,000 < 7,500 → <
(f) 800 + 88 = 888 mg; 880 + 8 = 888 mg. Equal → =

Answer: (a) > (b) < (c) < (d) < (e) < (f) =

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Q6 Observe the pictures: an elephant weighs 5,000 kg and a blue whale weighs 40 times as much. Fill in the whale's weight in kg.

SOLUTION

Whale's weight = 40 x elephant's weight.
= 40 x 5,000 kg = 2,00,000 kg.

Answer: 2,00,000 kg

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Q7 Answer the following questions using: 100 kg = 1 quintal, 1,000 kg = 1 tonne.
(a) 5,000 kg = ___ quintals = ___ tonne
(b) 9,000 kg = ___ quintals
(c) ___ kg = 8 tonnes

SOLUTION

(a) 5,000 kg / 100 = 50 quintals. 5,000 kg / 1,000 = 5 tonnes.
(b) 9,000 kg / 100 = 90 quintals.
(c) 8 tonnes x 1,000 = 8,000 kg.

Answer: (a) 50 quintals, 5 tonne (b) 90 quintals (c) 8,000 kg

## Exercise 8.7 — King's Weight — Word Problems (p. 109)

Q1 In a kingdom, the king donates wheat grains equal to 10 times his weight on his birthday.
(a) If he donates 800 kg of wheat grain this birthday, what is his current weight?
(b) If he had donated 780 kg of wheat grain on his last birthday, what was his weight last year?
(c) How much weight did he gain in a year until this birthday?

SOLUTION

(a) Donated = 10 x weight, so weight = donated / 10.
Current weight = 800 / 10 = 80 kg.

(b) Weight last year = 780 / 10 = 78 kg.

(c) Weight gain = 80 - 78 = 2 kg.

Answer: (a) 80 kg (b) 78 kg (c) 2 kg

## Exercise 8.8 — The Grocery Store — Addition and Subtraction of Weights (p. 110–111)

Q1 Rathna bought 2 kg 500 g rice for daily use and 1 kg 750 g for the Pongal festival. How much total rice did she buy? How much extra rice did she buy for household use than for the Pongal festival?

SOLUTION

Total rice = 2 kg 500 g + 1 kg 750 g.
Add grams: 500 + 750 = 1,250 g = 1 kg 250 g.
Add kg: 2 + 1 = 3 kg, plus the 1 kg from grams = 4 kg.
Total = 4 kg 250 g.

Extra for household = 2 kg 500 g - 1 kg 750 g.
2,500 g - 1,750 g = 750 g.

Answer: Total rice = 4 kg 250 g. She bought 750 g more for household use than for the Pongal festival.

## Exercise 8.9 — Let Us Do — Weight Addition and Subtraction Problems (p. 111)

Q1 A restaurant owner uses 5 kg 200 g, 8 kg 900 g, and 12 kg 600 g of onions over 3 days. What is the total weight of onions used in 3 days?

SOLUTION

Total = 5 kg 200 g + 8 kg 900 g + 12 kg 600 g.
Convert to grams: 5,200 + 8,900 + 12,600 = 26,700 g.
26,700 g = 26 kg 700 g.

Answer: 26 kg 700 g

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Q2 Aarav lifts two baskets of apples weighing 2 kg 100 g and 3 kg 950 g. What is the total weight?

SOLUTION

Total = 2 kg 100 g + 3 kg 950 g.
2,100 g + 3,950 g = 6,050 g = 6 kg 50 g.

Answer: 6 kg 50 g

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Q3 4 kg 500 g of sand is used from a sack weighing 10 kg. How much sand is left?

SOLUTION

Sand left = 10 kg - 4 kg 500 g.
10,000 g - 4,500 g = 5,500 g = 5 kg 500 g.

Answer: 5 kg 500 g

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Q4 A rice sack weighs 9 kg 750 g. After some rice is used, it weighs 3 kg 700 g. How much rice was used?

SOLUTION

Rice used = 9 kg 750 g - 3 kg 700 g.
9,750 g - 3,700 g = 6,050 g = 6 kg 50 g.

Answer: 6 kg 50 g

Q5 A delivery truck delivered 17 kg 900 g in the morning and 12 kg 700 g in the afternoon. What is the total?

SOLUTION

Total = 17 kg 900 g + 12 kg 700 g.
17,900 g + 12,700 g = 30,600 g = 30 kg 600 g.

Answer: 30 kg 600 g

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Q6 A box of books weighs 14 kg 750 g. After removing some books, it weighs 10 kg 500 g. What is the weight of the books removed?

SOLUTION

Books removed = 14 kg 750 g - 10 kg 500 g.
14,750 g - 10,500 g = 4,250 g = 4 kg 250 g.

Answer: 4 kg 250 g

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Q7 In a Gurdwara community kitchen, 65 kg of flour was purchased. Out of this, 42 kg 275 g was used for langar. The next day, 52 kg 500 g more flour was bought. What is the total flour now available?

SOLUTION

Flour remaining after langar = 65,000 g - 42,275 g = 22,725 g.
New flour bought = 52,500 g.
Total flour = 22,725 + 52,500 = 75,225 g = 75 kg 225 g.

Answer: 75 kg 225 g

## Exercise 8.10 — Let Us Do — Multiplication and Division of Weights / Grocery Costs (p. 112)

Q1 The cost of some grocery items is given below. Find the total cost of each item.
Rice: 12 kg 500 g at Rs 60 per kg
Flour: 7 kg 250 g at Rs 40 per kg
Sugar: 5 kg at Rs 45 per kg
Chana dal: 3 kg 600 g at Rs 70 per kg
Besan: 4 kg at Rs 60 per kg
Jaggery: 1 kg 400 g at Rs 50 per kg

SOLUTION

Convert each weight to kg (as a decimal) and multiply by cost per kg:

Rice: 12 kg 500 g = 12.5 kg. Cost = 12.5 x Rs 60 = Rs 750.
Flour: 7 kg 250 g = 7.25 kg. Cost = 7.25 x Rs 40 = Rs 290.
Sugar: 5 kg. Cost = 5 x Rs 45 = Rs 225.
Chana dal: 3 kg 600 g = 3.6 kg. Cost = 3.6 x Rs 70 = Rs 252.
Besan: 4 kg. Cost = 4 x Rs 60 = Rs 240.
Jaggery: 1 kg 400 g = 1.4 kg. Cost = 1.4 x Rs 50 = Rs 70.

Answer: Rice: Rs 750 | Flour: Rs 290 | Sugar: Rs 225 | Chana dal: Rs 252 | Besan: Rs 240 | Jaggery: Rs 70

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Q2 4 people need 500 g rice for a meal. How much rice will be needed for 8 people if they eat a similar quantity?

SOLUTION

8 people = 2 x 4 people, so rice needed = 2 x 500 g = 1,000 g = 1 kg.

Answer: 1,000 g (1 kg)

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Q3 5 kg of tomatoes cost Rs 73. How much will 10 kg of tomatoes cost?

SOLUTION

10 kg = 2 x 5 kg, so cost = 2 x Rs 73 = Rs 146.

Answer: Rs 146

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Q4 Nitesh is a scrap dealer. How much would he have paid for:
(a) 16 kg of old newspaper at Rs 8 per kg?
(b) 20 kg iron at Rs 200 per 10 kg?
(c) 10 kg plastic at Rs 30 per 5 kg?

SOLUTION

(a) 16 kg x Rs 8 = Rs 128.

(b) Rs 200 for every 10 kg. 20 kg = 2 x 10 kg.
Cost = 2 x Rs 200 = Rs 400.
Double number line: 10 kg → Rs 200; 20 kg → Rs 400.

(c) Rs 30 for 5 kg. 10 kg = 2 x 5 kg.
Cost = 2 x Rs 30 = Rs 60.
Double number line: 5 kg → Rs 30; 10 kg → Rs 60.

Answer: (a) Rs 128 (b) Rs 400 (c) Rs 60

## Exercise 8.11 — Measuring Capacity — Sense of Units (p. 113)

Q1 How much water and milk do we need to make 2 cups of tea? Do we need 1 l of water? Is 500 ml enough?

SOLUTION

2 cups of tea need about 300–400 ml of water and milk combined.
1 litre (1,000 ml) is too much — it would make far more than 2 cups.
500 ml is a reasonable amount for making 2 cups of tea.
So 500 ml of water is roughly correct; 1 l is too much.

Answer: 500 ml is about right for 2 cups of tea. 1 l is too much.

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Q2 A bucket can hold a maximum of 20 ml of water. Is this correct? Which unit should be used?

SOLUTION

20 ml is far too little — that is about 4 teaspoons.
A bucket holds much more water, usually 10–20 litres.
The correct unit is litres (l), not millilitres (ml).

Answer: No, 20 ml is wrong. A bucket holds about 10–20 l. The unit should be litres (l).

## Exercise 8.12 — Big to Small, Small to Big — ml and l Conversions (p. 113)

Q1 Ramiz brings a 500 ml water bottle to school. He drinks two bottles at school. How much water does he drink? How many litres is that?

SOLUTION

Ramiz drinks 500 ml + 500 ml = 1,000 ml.
1,000 ml = 1 l.
So Ramiz drinks 1 l of water at school.

Answer: 500 ml + 500 ml = 1,000 ml = 1 l

Q2 Muskaan drinks 3 l of water in a day. How many times would she need to refill a 500 ml water bottle? How many ml does she drink?

SOLUTION

3 l = 3,000 ml.
Each bottle = 500 ml.
Number of refills = 3,000 / 500 = 6 times.
Muskaan drinks 3,000 ml in a day.

Answer: 6 times; 3,000 ml

Q3 Write the total capacity of the following containers in each blank.
Group 1: a 1 l jug, a 500 ml container, and a 100 ml container.
Group 2: a 1 l jug and a 500 ml container.
Group 3: a 500 ml bottle, a 100 ml container, and two 50 ml containers.
Group 4: two 1 l jugs and a 100 ml container.

SOLUTION

Group 1: 1,000 ml + 500 ml + 100 ml = 1,600 ml = 1 l 600 ml.
Group 2: 1,000 ml + 500 ml = 1,500 ml = 1 l 500 ml.
Group 3: 500 ml + 100 ml + 50 ml + 50 ml = 700 ml.
Group 4: 1,000 ml + 1,000 ml + 100 ml = 2,100 ml = 2 l 100 ml.

Total of all groups: 1,600 + 1,500 + 700 + 2,100 = 5,900 ml = 5 l 900 ml.

Answer: Group 1: 1 L 600 ml | Group 2: 1 L 500 ml | Group 3: 700 ml | Group 4: 2 L 100 ml

## Exercise 8.13 — Different Units but Same Measure — The Milkman's Delivery, l and ml (p. 114)

Q1 Bhalerao's family orders 2 l of milk every day. They have a vessel marked in ml only. What mark will you see in the vessel for 2 l?

SOLUTION

1 l = 1,000 ml.
2 l = 2 x 1,000 = 2,000 ml.
The vessel will show 2,000 ml.

Answer: 2,000 ml

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Q2 Fill in the missing values on the double number line.
l: 1, 2, 6, 8, ___, 14, ___, ___
ml: 1,000, 2,000, ___, ___, 12,000, ___, 20,000, 25,000

SOLUTION

1 l = 1,000 ml.

l side: 1, 2, 6, 8, 12, 14, 20, 25
ml side: 1,000; 2,000; 6,000; 8,000; 12,000; 14,000; 20,000; 25,000

Missing l values: 12 (at 12,000 ml), 20 (at 20,000 ml), 25 (at 25,000 ml).
Missing ml values: 6,000 (at 6 l) and 8,000 (at 8 l) and 14,000 (at 14 l).

Answer: Missing l: 12, 20, 25. Missing ml: 6,000; 8,000; 14,000.

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Q3 Complete the milkman's delivery table.
Family | Milk in l | Quantity in ml
Arora's: 8 l | ___
Nair's: 14 l | ___
Shrivastava's: ___ l | 12,000
Das's: ___ l | 20,000
Rao's: ___ l | 25,000

SOLUTION

Arora's: 8 l = 8 x 1,000 = 8,000 ml.
Nair's: 14 l = 14 x 1,000 = 14,000 ml.
Shrivastava's: 12,000 ml / 1,000 = 12 l.
Das's: 20,000 ml / 1,000 = 20 l.
Rao's: 25,000 ml / 1,000 = 25 l.

Answer: Arora's: 8,000 ml | Nair's: 14,000 ml | Shrivastava's: 12 l | Das's: 20 l | Rao's: 25 l

## Exercise 8.14 — Let Us Think — l to ml Conversions (p. 115)

Q1 Mary and Daisy filled a bottle with 1 l 400 ml of water. Mary says it is 1,400 ml. Daisy says it is 1,040 ml. Who is correct and why?

SOLUTION

1 l 400 ml means 1 litre and 400 millilitres.
1 l = 1,000 ml.
1 l 400 ml = 1,000 ml + 400 ml = 1,400 ml.

Daisy's mistake: she confused 400 ml with 40 ml, giving 1,040 ml.
Mary is correct.

Answer: Mary is correct. 1 l 400 ml = 1,000 + 400 = 1,400 ml. Daisy confused 400 ml with 40 ml.

Q2 Convert and fill in the blanks.
(a) 3 l 8 ml = ___ ml
(b) 9 l 90 ml = ___ ml
(c) 14,075 ml = ___ l ___ ml
(d) 8 l 86 ml = ___ ml
(e) 12,200 ml = ___ l ___ ml
(f) 18,350 ml = ___ l ___ ml

SOLUTION

(a) 3 l 8 ml: 3 x 1,000 + 8 = 3,000 + 8 = 3,008 ml.
(b) 9 l 90 ml: 9 x 1,000 + 90 = 9,000 + 90 = 9,090 ml.
(c) 14,075 ml: 14,075 / 1,000 = 14 remainder 75 → 14 l 75 ml.
(d) 8 l 86 ml: 8 x 1,000 + 86 = 8,000 + 86 = 8,086 ml.
(e) 12,200 ml: 12,200 / 1,000 = 12 remainder 200 → 12 l 200 ml.
(f) 18,350 ml: 18,350 / 1,000 = 18 remainder 350 → 18 l 350 ml.

Answer: (a) 3,008 ml (b) 9,090 ml (c) 14 l 75 ml (d) 8,086 ml (e) 12 l 200 ml (f) 18 l 350 ml

## Exercise 8.15 — Let Us Compare — Petrol Pump and Capacity Comparisons (p. 115–116)

Q1 Kiran records petrol sales at her pump in a day.

Vehicle | No. of vehicles | Fuel per vehicle (l)
Truck | 3 | 500
Bus | 6 | 300
Car | 10 | 50
Auto Rickshaw | 12 | 8
Two-wheeler | 25 | 5

Find total fuel for each vehicle type. Then:
(a) How much more fuel is bought for buses than trucks?
(b) What is the total fuel sold that day?

SOLUTION

Total fuel per vehicle type:
Trucks: 3 x 500 = 1,500 l
Buses: 6 x 300 = 1,800 l
Cars: 10 x 50 = 500 l
Autos: 12 x 8 = 96 l
Two-wheelers: 25 x 5 = 125 l

(a) Buses - Trucks = 1,800 - 1,500 = 300 l more for buses.
(b) Total = 1,500 + 1,800 + 500 + 96 + 125 = 4,021 l.

Answer: Trucks: 1,500 l | Buses: 1,800 l | Cars: 500 l | Autos: 96 l | Two-wheelers: 125 l. (a) 300 l more for buses (b) Total: 4,021 l

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Q2 Compare the following quantities using <, =, >.
(a) 5 l 600 ml ___ 5,400 ml
(b) 10 l 100 ml ___ 1 l 600 ml
(c) 190 ml + 800 ml ___ 800 ml + 109 ml
(d) 3 l 600 ml ___ 3,600 ml
(e) 4 l 50 ml ___ 4 l 500 ml

SOLUTION

(a) 5 l 600 ml = 5,600 ml; compare 5,600 with 5,400. 5,600 > 5,400 → >
(b) 10 l 100 ml = 10,100 ml; 1 l 600 ml = 1,600 ml. 10,100 > 1,600 → >
(c) 190 + 800 = 990 ml; 800 + 109 = 909 ml. 990 > 909 → >
(d) 3 l 600 ml = 3,600 ml; compare with 3,600 ml. Equal → =
(e) 4 l 50 ml = 4,050 ml; 4 l 500 ml = 4,500 ml. 4,050 < 4,500 → <

Answer: (a) > (b) > (c) > (d) = (e) <

Q3 Tina bought 2 l 500 ml of petrol. Sam bought 2 l 800 ml more than Tina. How much petrol did Sam buy? After refueling, Sam's gauge read 9 l. How much fuel did Sam have before refueling?

SOLUTION

Sam's petrol = 2 l 500 ml + 2 l 800 ml.
= (2 + 2) l + (500 + 800) ml = 4 l + 1,300 ml = 4 l + 1 l 300 ml = 5 l 300 ml.

Fuel before refueling = 9 l - 5 l 300 ml.
9,000 ml - 5,300 ml = 3,700 ml = 3 l 700 ml.

Answer: Sam bought 5 l 300 ml. His bike had 3 l 700 ml before refueling.

## Exercise 8.16 — Let Us Solve — Capacity Word Problems (p. 118)

Q1 Riya fills one 2 l bottle and four 500 ml bottles. Her friend Aarav fills three 750 ml bottles. Who filled more water? How much more?

SOLUTION

Riya's total = 2,000 ml + (4 x 500) ml = 2,000 + 2,000 = 4,000 ml.
Aarav's total = 3 x 750 = 2,250 ml.

Riya filled more. Difference = 4,000 - 2,250 = 1,750 ml = 1 l 750 ml.

Answer: Riya filled more by 1 l 750 ml. (Riya: 4,000 ml; Aarav: 2,250 ml)

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Q2 A bottle of milk is poured equally into 8 glasses, leaving 120 ml in the bottle.
(a) If each glass holds 360 ml, what is the total capacity of 8 glasses?
(b) How much milk was in the bottle initially?
(c) If 1 l of milk costs Rs 40, how much will 3 l cost?

SOLUTION

(a) Total in 8 glasses = 8 x 360 = 2,880 ml.

(b) Milk in bottle initially = milk in glasses + leftover = 2,880 + 120 = 3,000 ml = 3 l.

(c) Cost of 3 l = 3 x Rs 40 = Rs 120.

Answer: (a) 2,880 ml (b) 3 l (3,000 ml) (c) Rs 120

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Q3 A juice vendor has a 5 l container of orange juice. Each glass holds 250 ml.
(a) How many full glasses can he serve?
(b) If he has served 10 glasses, how much juice is left?
(c) If 250 ml of juice sells at Rs 25, how much will he earn by selling all 5 l?

SOLUTION

5 l = 5,000 ml.

(a) Full glasses = 5,000 / 250 = 20 glasses.

(b) Juice served = 10 x 250 = 2,500 ml. Juice left = 5,000 - 2,500 = 2,500 ml.

(c) Total glasses from 5 l = 20. Earnings = 20 x Rs 25 = Rs 500.

Answer: (a) 20 glasses (b) 2,500 ml left (c) Rs 500

Q4 In a factory, 8 l 400 ml of oil needs to be equally poured into 7 containers. How much oil will each container hold?

SOLUTION

Total oil = 8 l 400 ml = 8,400 ml.

Each container = 8,400 / 7 = 1,200 ml = 1 l 200 ml.

Answer: 1 l 200 ml per container

Q5 If one container holds 1 l 75 ml of buttermilk, how much buttermilk will be there in 8 such containers?

SOLUTION

1 l 75 ml = 1,075 ml.

8 containers = 8 x 1,075 = 8,600 ml = 8 l 600 ml.

Answer: 8 l 600 ml