



5

Metric Measures

Exercise-1

1. km 2. cm 3. m 4. cm 5. cm

Exercise-2

1. (a) $7 \text{ cm} = 7 \times 10 \text{ mm} = 70 \text{ mm}$
(b) $15 \text{ cm } 3 \text{ mm} = (15 \times 10) \text{ mm} + 3 \text{ mm} = 150 \text{ mm} + 3 \text{ mm} = 153 \text{ mm}$
(c) $1.5 \text{ cm} = 1.5 \times 10 \text{ mm} = 15 \text{ mm}$
(d) $7 \text{ m } 4 \text{ cm} = 7 \times 1000 \text{ mm} + 4 \times 10 \text{ mm} = 7000 \text{ mm} + 40 \text{ mm} = 7040 \text{ mm}$
(e) $8 \text{ dm } 4 \text{ cm } 2 \text{ mm} = 8 \times 100 \text{ mm} + 4 \times 10 \text{ mm} + 2 \text{ mm} = 800 \text{ mm} + 40 \text{ mm} + 2 \text{ mm} = 842 \text{ mm}$
(f) $9 \text{ m } 82 \text{ mm} = 9 \times 1000 \text{ mm} + 82 \text{ mm} = 9000 \text{ mm} + 82 \text{ mm} = 9082 \text{ mm}$
2. (a) $12 \text{ dm} = 12 \times 10 \text{ cm} = 120 \text{ cm}$
(b) $15.8 \text{ m} = 15.8 \times 100 \text{ cm} = 1580 \text{ cm}$
(c) $5 \text{ km} = 5 \times 100000 \text{ cm} = 500000 \text{ cm}$
(d) $4 \text{ m } 3 \text{ dm } 2 \text{ cm} = 4 \times 100 \text{ cm} + 3 \times 10 \text{ cm} + 2 \text{ cm} = 400 \text{ cm} + 30 \text{ cm} + 2 \text{ cm} = 432 \text{ cm}$
(e) $13 \text{ dm } 5 \text{ cm} = 13 \times 10 \text{ cm} + 5 \text{ cm} = 130 \text{ cm} + 5 \text{ cm} = 135 \text{ cm}$
(f) $6 \text{ km } 42 \text{ m } 12 \text{ cm} = 6 \times 100000 \text{ cm} + 42 \times 100 \text{ cm} + 12 \text{ cm} = 600000 \text{ cm} + 4200 \text{ cm} + 12 \text{ cm} = 604212 \text{ cm}$
3. (a) $7 \text{ km} = 7 \times 1000 \text{ m} = 7000 \text{ m}$
(b) $42.65 \text{ km} = 42.65 \times 1000 \text{ m} = 42650 \text{ m}$
(c) $9.52 \text{ km} = 9.52 \times 1000 \text{ m} = 9520 \text{ m}$
(d) $3 \text{ km } 255 \text{ m} = 3 \times 1000 \text{ m} + 255 \text{ m} = 3000 \text{ m} + 255 \text{ m} = 3255 \text{ m}$
(e) $8 \text{ km } 159 \text{ m} = 8 \times 1000 \text{ m} + 159 \text{ m} = 8000 \text{ m} + 159 \text{ m} = 8159 \text{ m}$
(f) $32 \text{ km } 42 \text{ m} = 32 \times 1000 \text{ m} + 42 \text{ m} = 32000 \text{ m} + 42 \text{ m} = 32042 \text{ m}$
4. (a) $6 \text{ m} = 6 \times 10 \text{ dm} = 60 \text{ dm}$
(b) $3.8 \text{ m} = 3.8 \times 10 \text{ dm} = 38 \text{ dm}$
(c) $17.3 \text{ m} = 17.3 \times 10 \text{ dm} = 173 \text{ dm}$
(d) $7 \text{ m } 4 \text{ dm} = 7 \times 10 \text{ dm} + 4 \text{ dm} = 70 \text{ dm} + 4 \text{ dm} = 74 \text{ dm}$
(e) $3 \text{ km } 4 \text{ m} = 3 \times 10000 \text{ dm} + 4 \times 10 \text{ dm} = 30000 \text{ dm} + 40 \text{ dm} = 30040 \text{ dm}$

$$10) \quad 2 \text{ km } 2 \text{ m } 2 \text{ dm} = 2 \times 10000 \text{ dm} + 2 \times 10 \text{ dm} + 2 \text{ dm} = 20000 \text{ dm} \\ + 20 \text{ dm} + 2 \text{ dm} = 20022 \text{ dm}$$

Exercise-3

1. 50 mm = $(50 \div 10) \text{ cm} = 5 \text{ cm}$
2. 142 mm = $(142 \div 10) \text{ cm} = 14 \text{ cm } 2 \text{ mm}$
3. 625 cm = $(625 \div 100) \text{ m} = 6 \text{ m } 25 \text{ cm}$
4. 5285 cm = $(5285 \div 100) \text{ m} = 52 \text{ m } 85 \text{ cm}$
5. 921 dm = $(921 \div 10) \text{ m} = 92 \text{ m } 1 \text{ dm}$
6. 827 dm = $(827 \div 10) \text{ m} = 82 \text{ m } 7 \text{ dm}$
7. 8000 m = $(8000 \div 1000) \text{ km} = 8 \text{ km}$
8. 9257 m = $(9257 \div 1000) \text{ km} = 9 \text{ km } 257 \text{ m}$
9. 6578 m = $(6578 \div 1000) \text{ km} = 6 \text{ km } 578 \text{ m}$

Exercise-4

1. (a) 12 kg = $(12 \times 1000) \text{ g} = 12000 \text{ g}$
 (b) 7 kg 256 g = $(7 \times 1000 + 256) \text{ g} = (7000 + 256) \text{ g} = 7256 \text{ g}$
 (c) 15 kg 15 g = $(15 \times 1000 + 15) \text{ g} = (15000 + 15) \text{ g} = 15015 \text{ g}$
2. (a) 19 g = $(19 \times 1000) \text{ mg} = 19000 \text{ mg}$
 (b) 25 g 25 mg = $(25 \times 1000 + 25) \text{ mg} = (25000 + 25) \text{ mg} = 25025 \text{ mg}$
 (c) 82 g 82 mg = $(82 \times 1000 + 82) \text{ mg} = (82000 + 82) \text{ mg} = 82082 \text{ mg}$
3. (a) 2387 g = $(2387 \div 1000) \text{ kg} = 2 \text{ kg } 387 \text{ g}$
 (b) 6700 g = $(6700 \div 1000) \text{ kg} = 6 \text{ kg } 700 \text{ g}$
 (c) 8080 g = $(8080 \div 1000) \text{ kg} = 8 \text{ kg } 80 \text{ g}$
4. (a) 4200 mg = $(4200 \div 1000) \text{ g} = 4 \text{ g } 200 \text{ mg}$
 (b) 3255 mg = $(3255 \div 1000) \text{ g} = 3 \text{ g } 255 \text{ mg}$
 (c) 7288 mg = $(7288 \div 1000) \text{ g} = 7 \text{ g } 288 \text{ mg}$

Exercise-5

1. (a) 15 kℓ = $(15 \times 1000) \text{ ℓ} = 15000 \text{ ℓ}$
 (b) 8 kℓ 8 ℓ = $(8 \times 1000 + 8) \text{ ℓ} = (8000 + 8) \text{ ℓ} = 8008 \text{ ℓ}$
 (c) 12 kℓ 265 ℓ = $(12 \times 1000 + 265) \text{ ℓ} = (12000 + 265) \text{ ℓ} = 12265 \text{ ℓ}$

$$2. (a) 28 \ell = (28 \times 1000) \text{ m}\ell = 28000 \text{ m}\ell$$

$$(b) 7 \ell 270 \text{ m}\ell = (7 \times 1000 + 270) \text{ m}\ell = (7000 + 270) \text{ m}\ell = 7270 \text{ m}\ell$$

$$(c) 10 \ell 450 \text{ m}\ell = (10 \times 1000 + 450) \text{ m}\ell = (10000 + 450) \text{ m}\ell = 10450 \text{ m}\ell$$

$$3. (a) 62000 \ell = (62000 \div 1000) \text{ k}\ell = 62 \text{ k}\ell$$

$$(b) 7280 \ell = (7280 \div 1000) \text{ k}\ell = 7 \text{ k}\ell 280 \ell$$

$$(c) 15255 \ell = (15255 \div 1000) \text{ k}\ell = 15 \text{ k}\ell 255 \ell$$

$$4. (a) 2534 \text{ m}\ell = (2534 \div 1000) \ell = 2 \ell 534 \text{ m}\ell$$

$$(b) 90508 \text{ m}\ell = (90508 \div 1000) \ell = 90 \ell 508 \text{ m}\ell$$

$$(c) 345678 \text{ m}\ell = (345678 \div 1000) \ell = 345 \ell 678 \text{ m}\ell$$

Exercise-6

$$1. (a) 15 \text{ m } 25 \text{ cm} + 8 \text{ m } 65 \text{ cm} \\ = 23 \text{ m } 90 \text{ cm}$$

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 15 \quad 25 \\ + 8 \quad 65 \\ \hline 23 \quad 90 \end{array}$$

$$(b) 75 \text{ kg } 250 \text{ g} + 62 \text{ kg } 127 \text{ g} \\ = 137 \text{ kg } 377 \text{ g}$$

$$\begin{array}{r} \text{kg} \quad \text{g} \\ 75 \quad 250 \\ + 62 \quad 127 \\ \hline 137 \quad 377 \end{array}$$

$$(c) 42 \text{ km } 175 \text{ m} + 69 \text{ km } 675 \text{ m} \\ = 111 \text{ km } 850 \text{ m}$$

$$\begin{array}{r} \text{km} \quad \text{m} \\ 42 \quad 175 \\ + 69 \quad 675 \\ \hline 111 \quad 850 \end{array}$$

$$(d) 8 \ell 455 \text{ m}\ell + 16 \ell 285 \text{ m}\ell \\ = 24 \ell 740 \text{ m}\ell$$

$$\begin{array}{r} \ell \quad \text{m}\ell \\ 8 \quad 455 \\ + 16 \quad 285 \\ \hline 24 \quad 740 \end{array}$$

$$(e) 54 \text{ kg } 672 \text{ g} + 67 \text{ kg } 372 \text{ g} \\ = 122 \text{ kg } 44 \text{ g}$$

$$\begin{array}{r} \text{kg} \quad \text{g} \\ \textcircled{1} \\ 54 \quad 672 \\ + 67 \quad 372 \\ \hline 122 \quad 044 \end{array}$$

$$(f) 33 \ell 333 \text{ m}\ell + 66 \ell 666 \text{ m}\ell \\ = 99 \ell 999 \text{ m}\ell$$

$$\begin{array}{r} \ell \quad \text{m}\ell \\ 33 \quad 333 \\ + 66 \quad 666 \\ \hline 99 \quad 999 \end{array}$$

$$(g) 128 \text{ km } 256 \text{ m} + 64 \text{ km } 128 \text{ m}$$

$$= 192 \text{ km } 384 \text{ m}$$

km	m
128	256
+ 64	128
192	384

$$(h) 85 \text{ m } 67 \text{ cm} + 37 \text{ m } 27 \text{ cm}$$

$$= 122 \text{ m } 94 \text{ cm}$$

m	cm
85	67
+ 37	27
122	94

$$2. (a) 32 \text{ kg } 100 \text{ g} - 17 \text{ kg } 400 \text{ g}$$

$$= 14 \text{ kg } 700 \text{ g}$$

kg	g
(31)	(1100)
32	100
- 17	400
14	700

$$(b) 10 \text{ l } 250 \text{ ml} - 5 \text{ l } 650 \text{ ml}$$

$$= 4 \text{ l } 600 \text{ ml}$$

l	ml
(9)	(1250)
10	250
- 5	650
4	600

$$(c) 55 \text{ km } 625 \text{ m} - 34 \text{ km } 800 \text{ m}$$

$$= 20 \text{ km } 825 \text{ m}$$

km	m
(54)	(1625)
55	625
- 34	800
20	825

$$(d) 27 \text{ m } 40 \text{ cm} - 19 \text{ m } 25 \text{ cm}$$

$$= 8 \text{ m } 15 \text{ cm}$$

m	cm
27	40
- 19	25
8	15

$$(e) 81 \text{ kg } 350 \text{ g} - 73 \text{ kg } 450 \text{ g}$$

$$= 7 \text{ kg } 900 \text{ g}$$

kg	g
(80)	(1350)
81	350
- 73	450
7	900

$$(f) 88 \text{ l } 672 \text{ ml} - 74 \text{ l } 900 \text{ ml}$$

$$= 13 \text{ l } 772 \text{ ml}$$

l	ml
(87)	(1672)
88	672
- 74	900
13	772

$$(g) 92 \text{ m } 66 \text{ cm} - 88 \text{ m } 46 \text{ cm}$$

$$= 4 \text{ m } 20 \text{ cm}$$

m	cm
92	66
- 88	46
4	20

$$(h) 72 \text{ km } 700 \text{ m} - 66 \text{ km } 825 \text{ m}$$

$$= 5 \text{ km } 875 \text{ m}$$

km	m
(71)	(1700)
72	700
- 66	825
5	875

$$3. \text{ Total quantity of milk} = 2 \ell 250 \text{ ml} + 4 \ell 450 \text{ ml} \\ = 6 \ell 700 \text{ ml}$$

$$\begin{array}{r} \ell \quad \text{ml} \\ 2 \quad 250 \\ + 4 \quad 450 \\ \hline 6 \quad 700 \end{array}$$

$$4. \text{ Quantity of juice} = 2 \ell 200 \text{ ml}$$

$$\text{Quantity of juice drank by Rahul} = 750 \text{ ml}$$

$$\therefore \text{ Quantity of juice left in the pack} = 2 \ell 200 \text{ ml} - 750 \text{ ml} \\ = 2200 \text{ ml} - 750 \text{ ml} \\ = 1450 \text{ ml} = 1 \ell 450 \text{ ml}$$

$$5. \text{ Total weight of vegetables bought} = 2 \text{ kg } 400 \text{ g} + 1 \text{ kg } 550 \text{ g} \\ = 3 \text{ kg } 950 \text{ g}$$

$$6. \text{ Weight of apples bought by the shopkeeper} = 9 \text{ kg } 500 \text{ g}$$

$$\text{Weight of apples sold} = 4 \text{ kg } 750 \text{ g}$$

$$\therefore \text{ Weight of apples left with the shopkeeper}$$

$$= 9 \text{ kg } 500 \text{ g} - 4 \text{ kg } 750 \text{ g}$$

$$= 4 \text{ kg } 750 \text{ g}$$

$$\begin{array}{r} \text{kg} \quad \text{g} \\ 9 \quad 500 \\ - 4 \quad 750 \\ \hline 4 \quad 750 \end{array}$$

$$7. \text{ Total distance travelled by Jeet} = 5 \text{ km } 250 \text{ m} + 3 \text{ km } 450 \text{ m} + 600 \text{ m}$$

$$\begin{array}{r} \text{km} \quad \text{m} \\ 5 \quad 250 \\ + 3 \quad 450 \\ + 0 \quad 600 \\ \hline 9 \quad 300 \end{array}$$

①

$$5 \quad 250$$

$$3 \quad 450$$

$$+ 0 \quad 600$$

$$\hline 9 \quad 300$$

So, total distance travelled by Jeet is 9 km 300 m.

$$8. \text{ Length of the ribbon bought by Ritu} = 32 \text{ m}$$

$$\text{Length of the ribbon used} = 18 \text{ m } 75 \text{ cm}$$

$$\therefore \text{ Length of the ribbon left} = 32 \text{ m} - 18 \text{ m } 75 \text{ cm} \\ = 13 \text{ m } 25 \text{ cm}$$

So, length of the ribbon left with Ritu is 13 m 25 cm.

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 32 \quad 00 \\ - 18 \quad 75 \\ \hline 13 \quad 25 \end{array}$$

$$9. \text{ The weight of a watermelon} = 3 \text{ kg } 525 \text{ g}$$

$$\text{The weight of a papaya} = 2 \text{ kg } 750 \text{ g}$$

$$\text{Difference in weights} = 3 \text{ kg } 525 \text{ g} - 2 \text{ kg } 750 \text{ g} \\ = 775 \text{ g}$$

So, watermelon is heavier than papaya by 775 g.

$$\begin{array}{r} \text{kg} \quad \text{g} \\ 3 \quad 525 \\ - 2 \quad 750 \\ \hline 0 \quad 775 \end{array}$$

Exercise-7

1. (a) m cm

$$\begin{array}{r} \textcircled{2} \\ 50 \quad 80 \\ \times \quad 3 \\ \hline 152 \quad 40 \end{array}$$

$$50 \text{ m } 80 \text{ cm} \times 3 = 152 \text{ m } 40 \text{ cm}$$

(b) kg g

$$\begin{array}{r} \textcircled{2} \quad \textcircled{6} \\ 4 \quad 290 \\ \times \quad 7 \\ \hline 30 \quad 030 \end{array}$$

$$4 \text{ kg } 290 \text{ g} \times 7 = 30 \text{ kg } 30 \text{ g}$$

(c) km m

$$\begin{array}{r} \textcircled{1} \quad \textcircled{1} \\ 9 \quad 120 \\ \times \quad 9 \\ \hline 82 \quad 080 \end{array}$$

$$9 \text{ km } 120 \text{ m} \times 9 = 82 \text{ km } 80 \text{ m}$$

(d) l ml

$$\begin{array}{r} \textcircled{11} \quad \textcircled{7} \\ 12 \quad 190 \\ \times \quad 8 \\ \hline 97 \quad 520 \end{array}$$

$$12 \text{ l } 190 \text{ ml} \times 8 = 97 \text{ l } 520 \text{ ml}$$

(e) kg g

$$\begin{array}{r} \textcircled{1} \quad \textcircled{1} \\ 13 \quad 113 \\ \times \quad 6 \\ \hline 78 \quad 678 \end{array}$$

$$13 \text{ kg } 113 \text{ g} \times 6 = 78 \text{ kg } 678 \text{ g}$$

(f) kg g

$$\begin{array}{r} \textcircled{2} \quad \textcircled{1} \quad \textcircled{4} \\ 14 \quad 290 \\ \times \quad 5 \\ \hline 71 \quad 450 \end{array}$$

$$14 \text{ kg } 290 \text{ g} \times 5 = 71 \text{ kg } 450 \text{ g}$$

2. (a) Converting 89 m 84 cm into cm.

$$89 \text{ m } 84 \text{ cm} = (8900 + 84) \text{ cm} = 8984 \text{ cm}$$

Now divide 8984 cm by 8.

$$8984 \text{ cm} \div 8 = 1123 \text{ cm}$$

Now converting it into m.

$$1123 \text{ cm} = (1123 \div 100) \text{ m} = 11 \text{ m } 23 \text{ cm}$$

$$\text{Thus, } 89 \text{ m } 84 \text{ cm} \div 8 = 11 \text{ m } 23 \text{ cm}$$

$$\begin{array}{r} 1123 \\ 8 \overline{) 8984} \\ \underline{-8} \\ 09 \\ \underline{-8} \\ 18 \\ \underline{-16} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

- (b) Converting 17 kg 983 g into g.

$$17 \text{ kg } 983 \text{ g} = (17000 + 983) \text{ g} = 17983 \text{ g}$$

Now, divide 17983 g by 7.

$$17983 \text{ g} \div 7 = 2569 \text{ g}$$

Now converting it into kg.

$$2569 \text{ g} = (2569 \div 1000) \text{ kg} = 2 \text{ kg } 569 \text{ g}$$

$$\text{Thus, } 17 \text{ kg } 983 \text{ g} \div 7 = 2 \text{ kg } 569 \text{ g}$$

$$\begin{array}{r} 2569 \\ 7 \overline{) 17983} \\ \underline{-14} \\ 39 \\ \underline{-35} \\ 48 \\ \underline{-42} \\ 63 \\ \underline{-63} \\ 0 \end{array}$$

- (c) Converting 36 l 504 ml into ml.

$$36 \text{ l } 504 \text{ ml} = (36000 + 504) \text{ ml} = 36504 \text{ ml}$$

Now, divide 36504 ml by 8.

$$36504 \text{ ml} \div 8 = 4563 \text{ ml}$$

Now, converting it into l.

$$4563 \text{ ml} = (4563 \div 1000) \text{ l} = 4 \text{ l } 563 \text{ ml}$$

$$\text{Thus, } 36 \text{ l } 504 \text{ ml} \div 8 = 4 \text{ l } 563 \text{ ml}$$

$$\begin{array}{r} 4563 \\ 8 \overline{) 36504} \\ \underline{-32} \\ 45 \\ \underline{-40} \\ 50 \\ \underline{-48} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

- (d) Converting 60 cm 8 mm into mm.

$$60 \text{ cm } 8 \text{ mm} = (60 \times 10 + 8) \text{ mm} = (600 + 8) \text{ mm} = 608 \text{ mm}$$

Now, divide 608 mm by 2.

$$608 \text{ mm} \div 2 = 304 \text{ mm}$$

Now converting it into cm.

$$304 \text{ mm} = (304 \div 10) \text{ cm} = 30 \text{ cm } 4 \text{ mm}$$

$$\text{Thus, } 60 \text{ cm } 8 \text{ mm} \div 2 = 30 \text{ cm } 4 \text{ mm}$$

$$\begin{array}{r} 304 \\ 2 \overline{) 608} \\ \underline{-6} \\ 008 \\ \underline{-8} \\ 0 \end{array}$$

- (e) Converting 50 kg 670 g into g.

$$50 \text{ kg } 670 \text{ g} = (50000 + 670) \text{ g} = 50670 \text{ g}$$

Now, divide 50670 g by 9.

$$50670 \text{ g} \div 9 = 5630 \text{ g}$$

Now converting it into kg.

$$5630 \text{ g} = (5630 \div 1000) \text{ kg} = 5 \text{ kg } 630 \text{ g}$$

$$\text{Thus, } 50 \text{ kg } 670 \text{ g} \div 9 = 5 \text{ kg } 630 \text{ g}$$

$$\begin{array}{r} 5630 \\ 9 \overline{) 50670} \\ \underline{-45} \\ 56 \\ \underline{-54} \\ 27 \\ \underline{-27} \\ 00 \\ \underline{-0} \\ 0 \end{array}$$

(f) Converting 28ℓ 160 ml into ml.

$$28\ell\ 160\ \text{ml} = (28000 + 160)\ \text{ml} = 28160\ \text{ml}$$

Now, divide 28160 ml by 11.

$$28160\ \text{ml} \div 11 = 2560\ \text{ml}$$

Now converting it into ℓ.

$$2560\ \text{ml} = (2560 \div 1000)\ell = 2\ell\ 560\ \text{ml}$$

$$\text{Thus, } 28\ell\ 160\ \text{ml} \div 11 = 2\ell\ 560\ \text{ml}$$

$$\begin{array}{r} 2560 \\ 11 \overline{) 28160} \\ \underline{-22} \\ 61 \\ \underline{-55} \\ 66 \\ \underline{-66} \\ 00 \\ \underline{-00} \\ 0 \end{array}$$

3. Distance travelled by Ruchi in a week

$$= 149\ \text{km}\ 415\ \text{m}$$

Distance travelled by Ruchi in 1 day

$$= 149\ \text{km}\ 415\ \text{m} \div 7$$

$$= 149415\ \text{m} \div 7$$

$$= 21345\ \text{m}$$

$$= 21\ \text{km}\ 345\ \text{m}$$

So, Ruchi travelled 21 km 345 m distance in a day.

4. Weight of one bag of rice = 7 kg 690 g

Total weight of 7 bags of rice

$$= 7\ \text{kg}\ 690\ \text{g} \times 7$$

$$= 53\ \text{kg}\ 830\ \text{g}$$

$$\begin{array}{r} 21345 \\ 7 \overline{) 149415} \\ \underline{-14} \\ 09 \\ \underline{-7} \\ 24 \\ \underline{-21} \\ 31 \\ \underline{-28} \\ 35 \\ \underline{-35} \\ 0 \end{array}$$

$$\begin{array}{r} \text{kg} \quad \text{g} \\ \textcircled{4} \textcircled{6} \\ 7 \quad 690 \\ \times \quad 7 \\ \hline 53 \quad 830 \end{array}$$

So, the total weight of 7 bags of rice will be 53 kg 830 g.

5. Total capacity of 14 containers

$$= 36\ell\ 218\ \text{ml}$$

Capacity of one container = 36ℓ 218 ml ÷ 14

$$= 36218\ \text{ml} \div 14$$

$$= 2587\ \text{ml}$$

$$= 2\ell\ 587\ \text{ml}$$

$$\begin{array}{r} 2587 \\ 14 \overline{) 36218} \\ \underline{-28} \\ 82 \\ \underline{-70} \\ 121 \\ \underline{-112} \\ 98 \\ \underline{-98} \\ 0 \end{array}$$

So, the capacity of one container is 2ℓ 587 ml.

Mental Maths Corner

1. (a) (iii)
 $9 \text{ cm } 1 \text{ mm} + 1 \text{ cm } 9 \text{ mm} = 10 \text{ cm } 10 \text{ mm} = 11 \text{ cm}$
- (b) (iv)
- (c) (i)
 $1 \ell 450 \text{ mL} + 11 \ell 550 \text{ mL} = 12 \ell 1000 \text{ mL} = 13 \ell$
- (d) (i)
 $72 \ell 772 \text{ mL} = (72 \times 1000 + 772) \text{ mL} = (72000 + 772) \text{ mL} = 72772 \text{ mL}$
- (e) (ii)
 $36 \text{ cm } 6 \text{ mm} = (36 \times 10 + 6) \text{ mm} = (360 + 6) \text{ mm} = 366 \text{ mm}$
2. (a) 4000 (b) 9200 (c) 15455 (d) 7000
(e) 12250 (f) 1847

Review Exercise

1. (a) $6 \text{ m} = (6 \times 100) \text{ cm} = 600 \text{ cm}$
(b) $7 \text{ dm} = (7 \times 10) \text{ cm} = 70 \text{ cm}$
(c) $5 \text{ m } 4 \text{ cm} = (5 \times 100 + 4) \text{ cm} = (500 + 4) \text{ cm} = 504 \text{ cm}$
(d) $7 \text{ m } 3 \text{ dm } 2 \text{ cm} = (7 \times 100 + 3 \times 10 + 2) \text{ cm} = (700 + 30 + 2) \text{ cm} = 732 \text{ cm}$
2. (a) $4 \text{ cm} = (4 \times 10) \text{ mm} = 40 \text{ mm}$
(b) $25 \text{ cm } 6 \text{ mm} = (25 \times 10 + 6) \text{ mm} = (250 + 6) \text{ mm} = 256 \text{ mm}$
(c) $57 \text{ cm} = (57 \times 10) \text{ mm} = 570 \text{ mm}$
3. (a) $9 \text{ km} = (9 \times 1000) \text{ m} = 9000 \text{ m}$
(b) $17 \text{ km } 25 \text{ m} = (17 \times 1000 + 25) \text{ m} = (17000 + 25) \text{ m} = 17025 \text{ m}$
(c) $28 \text{ km } 375 \text{ m} = (28 \times 1000 + 375) \text{ m} = (28000 + 375) \text{ m} = 28375 \text{ m}$
4. (a) $5625 \text{ g} = (5625 \div 1000) \text{ kg} = 5 \text{ kg } 625 \text{ g}$
(b) $3835 \text{ g} = (3835 \div 1000) \text{ kg} = 3 \text{ kg } 835 \text{ g}$
(c) $2050 \text{ g} = (2050 \div 1000) \text{ kg} = 2 \text{ kg } 50 \text{ g}$
5. (a) $2748 \text{ mL} = (2748 \div 1000) \ell = 2 \ell 748 \text{ mL}$
(b) $9036 \text{ mL} = (9036 \div 1000) \ell = 9 \ell 36 \text{ mL}$
(c) $7235 \text{ mL} = (7235 \div 1000) \ell = 7 \ell 235 \text{ mL}$

6. (a) $4 \text{ m } 75 \text{ cm} + 6 \text{ m } 85 \text{ cm}$
 $= 11 \text{ m } 60 \text{ cm}$

	m	cm
①		
	4	75
	+ 6	85
	<u>11</u>	<u>60</u>

(b) $18 \text{ kg } 840 \text{ g} + 25 \text{ kg } 725 \text{ g}$
 $= 44 \text{ kg } 565 \text{ g}$

	kg	g
①		
	18	840
	+ 25	725
	<u>44</u>	<u>565</u>

(c) $12 \text{ l } 540 \text{ ml} + 32 \text{ l } 245 \text{ ml} = 44 \text{ l } 785 \text{ ml}$

	l	ml
	12	540
	+ 32	245
	<u>44</u>	<u>785</u>

7. (a) $11 \text{ km } 375 \text{ m} - 7 \text{ km } 215 \text{ m}$
 $= 4 \text{ km } 160 \text{ m}$

	km	m
	11	375
	- 7	215
	<u>4</u>	<u>160</u>

(b) $78 \text{ kg } 650 \text{ g} - 56 \text{ kg } 900 \text{ g}$
 $= 21 \text{ kg } 750 \text{ g}$

	kg	g
⑦⑦		①650
	78	650
	- 56	900
	<u>21</u>	<u>750</u>

(c) $96 \text{ l } 545 \text{ ml} - 47 \text{ l } 400 \text{ ml} = 49 \text{ l } 145 \text{ ml}$

	l	ml
	96	545
	- 47	400
	<u>49</u>	<u>145</u>

8. (a) $15 \text{ kg } 9 \text{ g} = 15009 \text{ g}$

$15009 \text{ g} \times 13 = 195117 \text{ g}$

Now $195117 \text{ g} = 195 \text{ kg } 117 \text{ g}$

$15 \text{ kg } 9 \text{ g} \times 13 = 195 \text{ kg } 117 \text{ g}$

	15009
	$\times 13$
	<u>45027</u>
	+ 150090
	<u>195117</u>

(b)

	km	m
①		⑥④
	22	075
		$\times 8$
	<u>176</u>	<u>600</u>

$22 \text{ km } 75 \text{ m} \times 8 = 176 \text{ km } 600 \text{ m}$

(c)

	l	ml
①		②④
	9	125
		$\times 9$
	<u>82</u>	<u>125</u>

$9 \text{ l } 125 \text{ ml} \times 9 = 82 \text{ l } 125 \text{ ml}$

9. (a) $96 \text{ kg } 24 \text{ g} = 96024 \text{ g}$

$96024 \text{ g} \div 8 = 12003 \text{ g}$

$12003 \text{ g} = (12003 \div 1000) \text{ kg} = 12 \text{ kg } 3 \text{ g}$

$\therefore 96 \text{ kg } 24 \text{ g} \div 8 = 12 \text{ kg } 3 \text{ g}$

$$\begin{array}{r} 12003 \\ 8 \overline{) 96024} \\ \underline{-8} \\ 16 \\ \underline{-16} \\ 00 \\ \underline{-0} \\ 024 \\ \underline{-24} \\ 0 \end{array}$$

(b) $198 \ell 570 \text{ ml} = 198570 \text{ ml}$

$198570 \text{ ml} \div 6 = 33095 \text{ ml}$

$33095 \text{ ml} = (33095 \div 1000) \ell = 33 \ell 95 \text{ ml}$

So, $198 \ell 570 \text{ ml} \div 6 = 33 \ell 95 \text{ ml}$

$$\begin{array}{r} 33095 \\ 6 \overline{) 198570} \\ \underline{-18} \\ 18 \\ \underline{-18} \\ 057 \\ \underline{-54} \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

(c) $39 \text{ km } 488 \text{ m} = 39488 \text{ m}$

$39488 \text{ m} \div 4 = 9872 \text{ m}$

$9872 \text{ m} = (9872 \div 1000) \text{ km} = 9 \text{ km } 872 \text{ m}$

So, $39 \text{ km } 488 \text{ m} \div 4 = 9 \text{ km } 872 \text{ m}$

$$\begin{array}{r} 9872 \\ 4 \overline{) 39488} \\ \underline{-36} \\ 34 \\ \underline{-32} \\ 28 \\ \underline{-28} \\ 08 \\ \underline{-08} \\ 0 \end{array}$$

HOTS

Fill the 3 ℓ bucket with water and pour it into the empty 5 ℓ bucket. Fill the 3 ℓ bucket again and pour it into 5 ℓ bucket to fill it. This leaves exactly 1 ℓ in the 3 ℓ bucket. Empty the 5 ℓ bucket; pour the remaining 1 ℓ from the 3 ℓ bucket into the 5 ℓ bucket. Fill the 3 ℓ bucket again and pour it into the 5 ℓ bucket.

The 5 ℓ bucket now has exactly 4 ℓ of water.