St. Andrews Scots School

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Session: 2025-2026

Class: V **Subject: Mathematics** **Topic: Unit -11 (Measurement)**

Warm up + 3 tables(pg-117)

Measurement of weight, length and capacity

Conversion table (pg-118)

Ex-1 Q.1; Q.2 a,d,g,h,i; Q.3 a,d,g,h,i(Notebook)

Ex-2 Q.1 a,b; Q.2; Q.4 a,d; Q.5 a,e,f (Notebook)

Ex-3 Q.1 a,c; Q.2 a,d,f; Q.3 a,d,f (Notebook)

Worksheet

Exercise-1

1. **(a)** (iii) 3 dag 1 g 2 dg 3 cg

$= 3\text{ dag} + 1\text{ g} + 2\text{ dg} + 3\text{ cg} = 3 \times 10\text{ g} + 1\text{ g} + 2 \times \frac{1}{10}\text{ g} + 3 \times \frac{1}{100}\text{ g}$

$= 3 \times 10\text{ g} + 1\text{ g} + 2 \times 0.1\text{ g} + 3 \times 0.01\text{ g}$

$= 30\text{ g} + 1\text{ g} + 0.2\text{ g} + 0.03\text{ g} = 31.23\text{ g}$

(b) (ii) 3 dm 4 cm 4 mm

$= 3\text{ dm} + 4\text{ cm} + 4\text{ mm}$

$= \frac{3}{10}\text{ m} + \frac{4}{100}\text{ m} + \frac{4}{1000}\text{ m}$

$= 0.3\text{ m} + 0.04\text{ m} + 0.004\text{ m} = 0.344\text{ m}$

2. **(a)** $1\text{ km} = 1000\text{ m}$

$\therefore \quad 12\text{ km} = 12000\text{ m}$

So, $12\text{ km } 400\text{ m} = (12000 + 400)\text{ m} = 12400\text{ m}$

(b) $1\text{ m} = 100\text{ cm}$

$\therefore \quad 45\text{ m} = 45 \times 100\text{ cm} = 4500\text{ cm}$

So, $45\text{ m } 20\text{ cm} = (4500 + 20)\text{ cm} = 4520\text{ cm}$

(c) $1\text{ dam} = 1000\text{ cm}$

$\therefore \quad 2\text{ dam} = 2000\text{ cm}$

So, $2\text{ dam } 45\text{ cm} = (2000 + 45)\text{ cm} = 2045\text{ cm}$

(d) $1\text{ hg} = 100\text{ g}$

$\therefore \quad 8\text{ hg} = 8 \times 100\text{ g} = 800\text{ g}$

So, $8\text{ hg } 40\text{ g} = (800 + 40)\text{ g} = 840\text{ g}$

(e) $1\text{ kg} = 1000\text{ g}$

$\therefore \quad 54\text{ kg} = 54 \times 1000\text{ g} = 54000\text{ g}$

So, $54\text{ kg } 800\text{ g} = (54000 + 800)\text{ g} = 54800\text{ g}$

(f) $1\text{ g} = 1000\text{ mg}$

$\therefore \quad 11\text{ g} = 11 \times 1000\text{ mg} = 11000\text{ mg}$

So, $11\text{ g } 900\text{ mg} = (11000 + 900)\text{ mg} = 11900\text{ mg}$

(g) $45.5\,l = 45.5 \times 1000\text{ m}l = 45500\text{ m}l$

(h) $1\,l = 100\,c l$

$\therefore \quad 25\,l = 25 \times 100\,c l = 2500\,c l$

So, $25\,l\ 15\,c l = (2500 + 15)\,c l = 2515\,c l$

(i) $1\,l = 1000\text{ m}l$

$\therefore \quad 99\,l = 99000\text{ m}l$

So, $99\,l\ 99\text{ m}l = (99000 + 99)\text{ m}l = 99099\text{ m}l$

3. **(a)** $1\text{ m} = 100\text{ cm} \quad \Rightarrow \quad 1\text{ cm} = \frac{1}{100}\text{ m}$

$\therefore \quad 725\text{ cm} = 725 \times \frac{1}{100}\text{ m} = \frac{725}{100}\text{ m} = 7.25\text{ m}$

(d) $1\text{ km} = 1000\text{ m} \Rightarrow 1\text{ m} = \frac{1}{1000}\text{ km}$

$\therefore \quad 978\text{ m} = 978 \times \frac{1}{1000}\text{ km} = \frac{978}{1000}\text{ km} = 0.978\text{ km}$

(e) $1\text{ dg} = 100\text{ mg} \Rightarrow 1\text{ mg} = \frac{1}{100}\text{ dg}$

$\therefore \quad 1575\text{ mg} = 1575 \times \frac{1}{100}\text{ dg} = \frac{1575}{100}\text{ dg} = 15.75\text{ dg}$

(f) $1\text{ da}l = 100\text{ d}l \Rightarrow 1\text{ d}l = \frac{1}{100}\text{ da}l$

$\therefore \quad 3\text{ da}l\ 50\text{ d}l = 3\text{ da}l + 50 \times \frac{1}{100}\text{ da}l$

$= 3\text{ da}l + \frac{50}{100}\text{ da}l = 3\text{ da}l + 0.5\text{ da}l = 3.5\text{ da}l$

(g) $1\ l = 100\text{ c}l \Rightarrow 1\text{ c}l = \frac{1}{100}\ l$

$\therefore\ 9\ l\ 38\text{ c}l = 9\ l + 38 \times \frac{1}{100}\ l = 9\ l + \frac{38}{100}\ l = 9\ l + 0.38\ l = 9.38\ l$

(h) $1\text{ k}l = 1000\ l \Rightarrow 1\ l = \frac{1}{1000}\text{ k}l$

$\therefore \quad 735\ l = 735 \times \frac{1}{1000}\text{ k}l = \frac{735}{1000}\text{ k}l = 0.735\text{ k}l$

(i) $1\text{ kg} = 1000\text{ g} \Rightarrow 1\text{ g} = \frac{1}{1000}\text{ kg} = 0.001\text{ kg}$

So, $1845\text{ g} = 1845 \times 0.001\text{ kg} = 1.845\text{ kg}$

Exercise-2

1. **(a)** (i) The weight of a box full of dry fruits = 12.650 kg

The weight of dry fruits = 9 kg 800 g = 9.800 kg

The weight of empty box

= (12.650 – 9.800) kg

= 2.850 kg

= 2.850 × 1000 g = 2850 g

```
 ⓪⑪ ⑯
  12.650 kg
–  9.800 kg
-----------
   2.850 kg
```

(b) (ii) Total length of the cloth = 6 m 25 cm + 1 m 75 cm + 8 m 50 cm

= 6.25 m + 1.75 m + 8.50 m

= 16.50 m

```
 ①① ①
   6.25 m
   1.75 m
 + 8.50 m
---------
  16.50 m
```

1 cm	= 0.01 m
25 cm	= 0.25 m
75 cm	= 0.75 m
50 cm	= 0.50 m

(c) (iii) Total weight of the fruits

= 4 kg 200 g + 2 kg 800 g + 5 kg 750 g

= 4.200 kg + 2.800 kg + 5.750 kg

= 12.750 kg

```
 ①①
   4.200 kg
   2.800 kg
 + 5.750 kg
-----------
  12.750 kg
```

1 g	= 0.001 kg
200 g	= 0.200 kg
800 g	= 0.800 kg
750 g	= 0.750 kg

Thus, the total weight of fruits bought by Maya is 12.750 kg.

2. Quantity of water left in the tank at the end of the day

= 300 ℓ – 87 ℓ 225 mℓ

= 300 ℓ – 87.225 ℓ

= 212.775 ℓ

= 212 ℓ 775 mℓ

```
 ②⑨⑨ ⑨⑨⑩
  300.000 ℓ
 – 87.225 ℓ
-----------
  212.775 ℓ
```

1 mℓ	= 0.001 ℓ
225 mℓ	= 0.225 ℓ

3. Quantity of oil left

= 7 ℓ – 2 ℓ 355 mℓ

= 7 ℓ – 2.355 ℓ

= 4.645 ℓ

= 4 ℓ 645 mℓ

```
 ⑥ ⑨⑨⑩
  7.000 ℓ
– 2.355 ℓ
---------
  4.645 ℓ
```

1 mℓ	= 0.001 ℓ
355 mℓ	= 0.355 ℓ

4. **(a)** 1 ℓ = 0.001 kℓ, 35 ℓ = 0.035 kℓ, 10 ℓ = 0.010 kℓ

∴ 79 kℓ 35 ℓ = 79.035 kℓ

95 kℓ = 95.000 kℓ

80 kℓ 10 ℓ = 80.010 kℓ

```
 ②①
   79.035 kℓ
   95.000 kℓ
 + 80.010 kℓ
------------
  254.045 kℓ
```

So, 79 kℓ 35 ℓ + 95 kℓ + 80 kℓ 10 ℓ = 254.045 kℓ = 254 kℓ 45 ℓ

(d) 1 mℓ = 0.001 ℓ, 65 mℓ = 0.065 ℓ, 90 mℓ = 0.090 ℓ, 86 mℓ = 0.086 ℓ

∴ 99 ℓ 65 mℓ = 99.065 ℓ

90 mℓ = 0.090 ℓ

10 ℓ 86 mℓ = 10.086 ℓ

∴ 99 ℓ 65 mℓ + 90 mℓ + 10 ℓ 86 mℓ = 109.241 ℓ = 109 ℓ 241 mℓ

$$\begin{array}{r} 99.065\ \ell \\ 0.090\ \ell \\ +\ 10.086\ \ell \\ \hline 109.241\ \ell \end{array}$$

5. (a) 9.690 kg − 6.750 kg

= 2.940 kg

$$\begin{array}{r} 9.690\ \text{kg} \\ -\ 6.750\ \text{kg} \\ \hline 2.940\ \text{kg} \end{array}$$

(b) 1 m = 0.001 km, 625 m = 0.625 km, 125 m = 0.125 km

∴ 10 km 625 m = 10.625 km

12 km 125 m = 12.125 km

∴ 12 km 125 m − 10 km 625 m = 1.500 km = 1 km 500 m

$$\begin{array}{r} 12.125\ \text{km} \\ -10.625\ \text{km} \\ \hline 1.500\ \text{km} \end{array}$$

(c) 1 cm = 0.01 m, 89 cm = 0.89 m, 5 cm = 0.05 m

∴ 2 m 5 cm = 2.05 m

2 m 5 cm − 89 cm = 1.16 m

= 1 m 16 cm

$$\begin{array}{r} 2.05\ \text{m} \\ -0.89\ \text{m} \\ \hline 1.16\ \text{m} \end{array}$$

(d) 1 mℓ = 0.001 ℓ, 56 mℓ = 0.056 ℓ

∴ 10 ℓ 56 mℓ = 10.056 ℓ

20 ℓ = 20.000 ℓ

∴ 20 ℓ − 10 ℓ 56 mℓ = 9.944 ℓ = 9 ℓ 944 mℓ

$$\begin{array}{r} 20.000\ \ell \\ -10.056\ \ell \\ \hline 9.944\ \ell \end{array}$$

(e) 1 g = 0.001 kg, 390 g = 0.390 kg, 160 g = 0.160 kg

∴ 1 kg 160 g = 1.160 kg

∴ 1 kg 160 g − 390 g = 0.770 kg = 770 g

$$\begin{array}{r} 1.160\ \text{kg} \\ -\ 0.390\ \text{kg} \\ \hline 0.770\ \text{kg} \end{array}$$

(f) 1 mg = 0.001 g, 690 mg = 0.690 g, 150 mg = 0.150 g

∴ 8 g 690 mg = 8.690 g

20 g 150 mg = 20.150 g

∴ 20 g 150 mg − 8 g 690 mg = 11.460 g

= 11 g 460 mg

$$\begin{array}{r} 20.150\ \text{g} \\ -\ 8.690\ \text{g} \\ \hline 11.460\ \text{g} \end{array}$$

Exercise-3

1. **(a)** (ii) The total weight of 7 tins of biscuits $= 1\text{ kg }750\text{ g} \times 7$

$$\begin{array}{r} 1.750 \\ \times\ 7 \\ \hline 12.250 \end{array}$$

$= 1.750\text{ kg} \times 7$

$= 12.250\text{ kg}$

(b) (ii) The quantity of rice, each family will get $= 48\text{ kg }700\text{ g} \div 5$

$= 48.700\text{ kg} \div 5$

1 g	= 0.001 kg
700 g	= 0.700 kg

$= \left(\frac{48700}{1000} \div 5\right)\text{kg} = \left(\frac{\cancel{48700}^{9740}}{1000} \times \frac{1}{\cancel{5}}\right)\text{kg}$

$= \frac{9740}{1000}\text{ kg} = 9.740\text{ kg}$

(c) (ii) The length of the ribbon $= 8\text{ m }54\text{ cm} = 8.54\text{ m}$

It is cut into 7 equal pieces.

The length of each piece $= 8.54\text{ m} \div 7 = \frac{854}{100}\text{ m} \div 7$

1 cm	= 0.01 m
54 cm	= 0.54 m

$= \left(\frac{854}{100} \div 7\right)\text{m} = \left(\frac{\cancel{854}^{122}}{100} \times \frac{1}{\cancel{7}}\right)\text{m} = \frac{122}{100}\text{m}$

$= 1.22\text{ m}$

Thus, the length of each piece is 1.22 m.

2. **(a)** $6.97\text{ km} \times 1.7$

$= 11.849\text{ km}$

Put the decimal point 3 places from the right.

$$\begin{array}{r} 697 \\ \times\ 1.7 \\ \hline 4\ 879 \\ +\ 6\ 970 \\ \hline 11.849 \end{array}$$

(b) $3.58\text{ g} \times 2.2$

$= 7.876\text{ g}$

Put the decimal point 3 places from the right.

$$\begin{array}{r} 3.58 \\ \times\ 2.2 \\ \hline 716 \\ +\ 7\ 160 \\ \hline 7.876 \end{array}$$

(c) $6.6\text{ cm} \times 5.5$

$= 36.3\text{ cm}$

Put the decimal point 2 places from the right.

$$\begin{array}{r} 6.6 \\ \times\ 5.5 \\ \hline 330 \\ +\ 33\ 00 \\ \hline 36.30 \end{array}$$

(d) $5.061\text{ kg} \times 2.1$

$= 10.6281\text{ kg}$

Put the decimal point 4 places from the right.

$$\begin{array}{r} 5.061 \\ \times\ 2.1 \\ \hline 5\ 061 \\ +\ 10\ 1\ 220 \\ \hline 10.6\ 281 \end{array}$$

(e) $9.61\text{ mg} \times 1.2$

$= 11.532\text{ mg}$

Put the decimal point 3 places from the right.

$$\begin{array}{r} 9.61 \\ \times\ 1.2 \\ \hline 1\ 922 \\ +\ 9\ 6\ 10 \\ \hline 11.5\ 32 \end{array}$$

(f) $8.601\text{ m} \times 5.2$

$= 44.7252\text{ m}$

Put the decimal point 4 places from the right.

$$\begin{array}{r} 8.601 \\ \times\ 5.2 \\ \hline 1\ 7\ 202 \\ +\ 43\ 0\ 050 \\ \hline 44.7\ 252 \end{array}$$

3. **(a)** $6.96\,\text{g} \div 1.6 = 4.35\,\text{g}$

$$\frac{696}{100} \div \frac{16}{10} = \frac{\cancel{696}^{\,87}}{\cancel{100}} \times \frac{\cancel{10}}{\cancel{16}_{\,2}} = \frac{87}{20} = 4.35\,\text{g}$$

(b) $10659\,\text{c}\ell \div 1.7 = 6270\,\text{c}\ell$

$$10659 \div \frac{17}{10} = \cancel{10659}^{\,627} \times \frac{10}{\cancel{17}} = 6270\,\text{c}\ell$$

(c) $89.68\,\ell \div 0.12 = 747.33\,\ell$

$$\frac{8968}{100} \div \frac{12}{100} = \frac{\cancel{8968}^{\,2242}}{\cancel{100}} \times \frac{\cancel{100}}{\cancel{12}_{\,3}} = \frac{2242}{3} = 747.33\,\ell$$

(d) $93.285\,\text{m} \div 4.5 = 20.73\,\text{m}$

$$\frac{93285}{1000} \div \frac{45}{10} = \frac{\cancel{93285}^{\,18657}}{\cancel{100}} \times \frac{\cancel{10}}{\cancel{45}_{\,9}} = \frac{18657}{100 \times 9} = 20.73\,\text{m}$$

(e) $109.2\,\text{kg} \div 0.13 = 840\,\text{kg}$

$$\frac{1092}{10} \div \frac{13}{100} = \frac{\cancel{1092}^{\,84}}{\cancel{10}} \times \frac{\cancel{100}}{\cancel{13}_{\,1}} = 840\,\text{kg}$$

(f) $81.62\,\text{m} \div 2.7 = 30.22\,\text{m}$

$$\frac{8162}{100} \div \frac{27}{10} = \frac{8162}{\cancel{100}} \times \frac{\cancel{10}}{27} = \frac{8162}{10 \times 27} = 30.229\,\text{m}$$