

# **St. Andrews Scots Sr. Sec. School**

**9th Avenue, I.P. Extension, Patparganj, Delhi -110092**

**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)  $3 \text{ dag } 1 \text{ g } 2 \text{ dg } 3 \text{ cg}$

$$\begin{aligned} &= 3 \text{ dag} + 1 \text{ g} + 2 \text{ dg} + 3 \text{ cg} = 3 \times 10 \text{ g} + 1 \text{ g} + 2 \times \frac{1}{10} \text{ g} + 3 \times \frac{1}{100} \text{ g} \\ &= 3 \times 10 \text{ g} + 1 \text{ g} + 2 \times 0.1 \text{ g} + 3 \times 0.01 \text{ g} \\ &= 30 \text{ g} + 1 \text{ g} + 0.2 \text{ g} + 0.03 \text{ g} = 31.23 \text{ g} \end{aligned}$$

(b) (ii)  $3 \text{ dm } 4 \text{ cm } 4 \text{ mm}$

$$\begin{aligned} &= 3 \text{ dm} + 4 \text{ cm} + 4 \text{ mm} \\ &= \frac{3}{10} \text{ m} + \frac{4}{100} \text{ m} + \frac{4}{1000} \text{ m} \\ &= 0.3 \text{ m} + 0.04 \text{ m} + 0.004 \text{ m} = 0.344 \text{ m} \end{aligned}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(h)  $1 \text{ l} = 100 \text{ cl}$

$$\therefore 25 \text{ l} = 25 \times 100 \text{ cl} = 2500 \text{ cl}$$

$$\text{So, } 25 \text{ l } 15 \text{ cl} = (2500 + 15) \text{ cl} = 2515 \text{ cl}$$

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

$$\therefore 99 \text{ l} = 99000 \text{ ml}$$

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

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

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

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

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

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

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

$$(f) 1 \text{ dal} = 100 \text{ dl} \Rightarrow 1 \text{ dl} = \frac{1}{100} \text{ dal}$$

$$\begin{aligned} \therefore 3 \text{ dal} 50 \text{ dl} &= 3 \text{ dal} + 50 \times \frac{1}{100} \text{ dal} \\ &= 3 \text{ dal} + \frac{50}{100} \text{ dal} = 3 \text{ dal} + 0.5 \text{ dal} = 3.5 \text{ dal} \end{aligned}$$

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

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

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

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

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

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

## Exercise-2

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

$$\text{The weight of dry fruits} = 9 \text{ kg } 800 \text{ g} = 9.800 \text{ kg}$$

The weight of empty box

$$= (12.650 - 9.800) \text{ kg}$$

$$= 2.850 \text{ kg}$$

$$= 2.850 \times 1000 \text{ g} = 2850 \text{ g}$$

$$\begin{array}{r}
 \textcircled{11} \textcircled{16} \\
 \cancel{1} \cancel{2} . \cancel{8} 5 0 \text{ kg} \\
 - 9 . 8 0 0 \text{ kg} \\
 \hline
 2 . 8 5 0 \text{ kg}
 \end{array}$$

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

$$\begin{array}{r}
 \textcircled{11} \textcircled{1} \\
 6 . 2 5 \text{ m} \\
 1 . 7 5 \text{ m} \\
 + 8 . 5 0 \text{ m} \\
 \hline
 1 6 . 5 0 \text{ m}
 \end{array}
 \begin{array}{l}
 = 6.25 \text{ m} + 1.75 \text{ m} + 8.50 \text{ m} \\
 = 16.50 \text{ m}
 \end{array}$$

$$\begin{array}{l}
 1 \text{ cm} = 0.01 \text{ m} \\
 25 \text{ cm} = 0.25 \text{ m} \\
 75 \text{ cm} = 0.75 \text{ m} \\
 50 \text{ cm} = 0.50 \text{ m}
 \end{array}$$

(c) (iii) Total weight of the fruits

$$\begin{array}{r}
 \textcircled{11} \\
 4 . 2 0 0 \text{ kg} \\
 2 . 8 0 0 \text{ kg} \\
 + 5 . 7 5 0 \text{ kg} \\
 \hline
 1 2 . 7 5 0 \text{ kg}
 \end{array}
 \begin{array}{l}
 = 4 \text{ kg } 200 \text{ g} + 2 \text{ kg } 800 \text{ g} + 5 \text{ kg } 750 \text{ g} \\
 = 4.200 \text{ kg} + 2.800 \text{ kg} + 5.750 \text{ kg} \\
 = 12.750 \text{ kg}
 \end{array}$$

$$\begin{array}{l}
 1 \text{ g} = 0.001 \text{ kg} \\
 200 \text{ g} = 0.200 \text{ kg} \\
 800 \text{ g} = 0.800 \text{ kg} \\
 750 \text{ g} = 0.750 \text{ kg}
 \end{array}$$

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

$$\begin{array}{r}
 \textcircled{2} \textcircled{9} \textcircled{9} \textcircled{10} \\
 3 0 0 . 0 0 0 \text{ l} \\
 - 8 7 . 2 2 5 \text{ l} \\
 \hline
 2 1 2 . 7 7 5 \text{ l}
 \end{array}
 \begin{array}{l}
 = 300 \text{ l} - 87 \text{ l } 225 \text{ ml} \\
 = 300 \text{ l} - 87.225 \text{ l} \\
 = 212.775 \text{ l} \\
 = 212 \text{ l } 775 \text{ ml}
 \end{array}$$

$$\begin{array}{l}
 1 \text{ ml} = 0.001 \text{ l} \\
 225 \text{ ml} = 0.225 \text{ l}
 \end{array}$$

3. Quantity of oil left = 7 l - 2 l 355 ml

$$\begin{array}{r}
 \textcircled{6} \textcircled{9} \textcircled{10} \\
 7 . 0 0 0 \text{ l} \\
 - 2 . 3 5 5 \text{ l} \\
 \hline
 4 . 6 4 5 \text{ l}
 \end{array}
 \begin{array}{l}
 = 7 \text{ l} - 2.355 \text{ l} \\
 = 4.645 \text{ l} \\
 = 4 \text{ l } 645 \text{ ml}
 \end{array}$$

$$\begin{array}{l}
 1 \text{ ml} = 0.001 \text{ l} \\
 355 \text{ ml} = 0.355 \text{ l}
 \end{array}$$

4. (a)  $1 \text{ l} = 0.001 \text{ kl}$ ,  $35 \text{ l} = 0.035 \text{ kl}$ ,  $10 \text{ l} = 0.010 \text{ kl}$

$$\begin{array}{r}
 \therefore 79 \text{ kl } 35 \text{ l} = 79.035 \text{ kl} \\
 95 \text{ kl} = 95.000 \text{ kl} \\
 80 \text{ kl } 10 \text{ l} = 80.010 \text{ kl}
 \end{array}$$

$$\begin{array}{r}
 \textcircled{2} \textcircled{1} \\
 7 9 . 0 3 5 \text{ kl} \\
 9 5 . 0 0 0 \text{ kl} \\
 + 8 0 . 0 1 0 \text{ kl} \\
 \hline
 2 5 4 . 0 4 5 \text{ kl}
 \end{array}$$

So,  $79 \text{ kl } 35 \text{ l} + 95 \text{ kl} + 80 \text{ kl } 10 \text{ l} = 254.045 \text{ kl} = 254 \text{ kl } 45 \text{ l}$

$$(d) 1 \text{ m}\ell = 0.001 \ell, 65 \text{ m}\ell = 0.065 \ell, 90 \text{ m}\ell = 0.090 \ell, 86 \text{ m}\ell = 0.086 \ell$$

$$\therefore 99 \ell 65 \text{ m}\ell = 99.065 \ell$$

$$90 \text{ m}\ell = 0.090 \ell$$

$$10 \ell 86 \text{ m}\ell = 10.086 \ell$$

$$\begin{array}{r} \textcircled{1} \quad \textcircled{2} \textcircled{1} \\ 99.065 \ell \\ 0.090 \ell \\ + 10.086 \ell \\ \hline 109.241 \ell \end{array}$$

$$\therefore 99 \ell 65 \text{ m}\ell + 90 \text{ m}\ell + 10 \ell 86 \text{ m}\ell = 109.241 \ell = 109 \ell 241 \text{ m}\ell$$

5. (a)  $9.690 \text{ kg} - 6.750 \text{ kg}$

$$= 2.940 \text{ kg}$$

$$\begin{array}{r} \textcircled{8} \textcircled{16} \\ 9.690 \text{ kg} \\ - 6.750 \text{ kg} \\ \hline 2.940 \text{ kg} \end{array}$$

$$(b) 1 \text{ m} = 0.001 \text{ km}, 625 \text{ m} = 0.625 \text{ km}, 125 \text{ m} = 0.125 \text{ km}$$

$$\therefore 10 \text{ km} 625 \text{ m} = 10.625 \text{ km}$$

$$12 \text{ km} 125 \text{ m} = 12.125 \text{ km}$$

$$\begin{array}{r} \textcircled{1} \textcircled{11} \\ 10.625 \text{ km} \\ - 10.625 \text{ km} \\ \hline 1.500 \text{ km} \end{array}$$

$$\therefore 12 \text{ km} 125 \text{ m} - 10 \text{ km} 625 \text{ m} = 1.500 \text{ km} = 1 \text{ km} 500 \text{ m}$$

$$(c) 1 \text{ cm} = 0.01 \text{ m}, 89 \text{ cm} = 0.89 \text{ m}, 5 \text{ cm} = 0.05 \text{ m}$$

$$\therefore 2 \text{ m} 5 \text{ cm} = 2.05 \text{ m}$$

$$2 \text{ m} 5 \text{ cm} - 89 \text{ cm} = 1.16 \text{ m}$$

$$= 1 \text{ m} 16 \text{ cm}$$

$$\begin{array}{r} \textcircled{1} \\ 2.05 \text{ m} \\ - 0.89 \text{ m} \\ \hline 1.16 \text{ m} \end{array}$$

$$(d) 1 \text{ m}\ell = 0.001 \ell, 56 \text{ m}\ell = 0.056 \ell$$

$$\therefore 10 \ell 56 \text{ m}\ell = 10.056 \ell$$

$$20 \ell = 20.000 \ell$$

$$\therefore 20 \ell - 10 \ell 56 \text{ m}\ell = 9.944 \ell = 9 \ell 944 \text{ m}\ell$$

$$\begin{array}{r} \textcircled{9} \quad \textcircled{9} \textcircled{9} \\ \textcircled{1} \textcircled{10} \quad \textcircled{10} \textcircled{10} \textcircled{10} \\ 20.000 \ell \\ - 10.056 \ell \\ \hline 9.944 \ell \end{array}$$

$$(e) 1 \text{ g} = 0.001 \text{ kg}, 390 \text{ g} = 0.390 \text{ kg}, 160 \text{ g} = 0.160 \text{ kg}$$

$$\therefore 1 \text{ kg} 160 \text{ g} = 1.160 \text{ kg}$$

$$\therefore 1 \text{ kg} 160 \text{ g} - 390 \text{ g} = 0.770 \text{ kg} = 770 \text{ g}$$

$$\begin{array}{r} \textcircled{10} \\ \textcircled{1} \textcircled{10} \quad \textcircled{16} \\ 1.160 \text{ kg} \\ - 0.390 \text{ kg} \\ \hline 0.770 \text{ kg} \end{array}$$

$$(f) 1 \text{ mg} = 0.001 \text{ g}, 690 \text{ mg} = 0.690 \text{ g}, 150 \text{ mg} = 0.150 \text{ g}$$

$$\therefore 8 \text{ g} 690 \text{ mg} = 8.690 \text{ g}$$

$$20 \text{ g} 150 \text{ mg} = 20.150 \text{ g}$$

$$\therefore 20 \text{ g} 150 \text{ mg} - 8 \text{ g} 690 \text{ mg} = 11.460 \text{ g}$$

$$= 11 \text{ g} 460 \text{ mg}$$

$$\begin{array}{r} \textcircled{9} \quad \textcircled{10} \\ \textcircled{1} \textcircled{10} \quad \textcircled{8} \textcircled{15} \\ 20.150 \text{ g} \\ - 8.690 \text{ g} \\ \hline 11.460 \text{ g} \end{array}$$

### Exercise-3

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

$$\begin{array}{r}
 1.750 \\
 \times 7 \\
 \hline
 12.250
 \end{array}
 \begin{array}{l}
 = 1.750 \text{ kg} \times 7 \\
 = 12.250 \text{ kg}
 \end{array}$$

(b) (ii) The quantity of rice, each family will get =  $48\text{ kg }700\text{ g} \div 5$   
 $= 48.700 \text{ kg} \div 5$

$$\begin{array}{l}
 1\text{ g} = 0.001 \text{ kg} \\
 700\text{ g} = 0.700 \text{ kg}
 \end{array}
 \begin{array}{l}
 = \left( \frac{48700}{1000} + 5 \right) \text{ kg} \\
 = \left( \frac{48700}{1000} \times \frac{1}{5} \right) \text{ kg} \\
 = \frac{9740}{1000} \text{ kg} = 9.740 \text{ kg}
 \end{array}$$

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

It is cut into 7 equal pieces.

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

$$\begin{array}{l}
 1\text{ cm} = 0.01 \text{ m} \\
 54\text{ cm} = 0.54 \text{ m}
 \end{array}
 \begin{array}{l}
 = \left( \frac{854}{100} \div 7 \right) \text{ m} = \left( \frac{854}{100} \times \frac{1}{7} \right) \text{ m} = \frac{122}{100} \text{ m} \\
 = 1.22 \text{ m}
 \end{array}$$

Thus, the length of each piece is 1.22 m.

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

$$= 11.849 \text{ km} \quad \begin{array}{r} 6\ 9\ 7 \\ \times 1.7 \\ \hline 4\ 8\ 7\ 9 \end{array}$$

Put the decimal point 3 places from the right.

$$\begin{array}{r}
 + 6\ 9\ 7\ 0 \\
 \hline
 11.849
 \end{array}$$

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

$$= 7.876 \text{ g} \quad \begin{array}{r} 3.58 \\ \times 2.2 \\ \hline 716 \end{array}$$

Put the decimal point 3 places from the right.

$$\begin{array}{r}
 + 7\ 16\ 0 \\
 \hline
 7.876
 \end{array}$$

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

$$= 36.3 \text{ cm} \quad \begin{array}{r} 6.6 \\ \times 5.5 \\ \hline 330 \end{array}$$

Put the decimal point 2 places from the right.

$$\begin{array}{r}
 + 33\ 00 \\
 \hline
 36.30
 \end{array}$$

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

$$= 10.6281 \text{ kg} \quad \begin{array}{r} 5.061 \\ \times 2.1 \\ \hline 5061 \end{array}$$

Put the decimal point 4 places from the right.

$$\begin{array}{r}
 + 10\ 1\ 220 \\
 \hline
 10.6\ 281
 \end{array}$$

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

$$= 11.532 \text{ mg} \quad \begin{array}{r} 9.61 \\ \times 1.2 \\ \hline 1922 \end{array}$$

Put the decimal point 3 places from the right.

$$\begin{array}{r}
 + 9\ 6\ 10 \\
 \hline
 11.5\ 32
 \end{array}
 \quad \begin{array}{r} 8.601 \\ \times 5.2 \\ \hline 17202 \end{array}$$

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

$$= 44.7252 \text{ m} \quad \begin{array}{r} 8.601 \\ \times 5.2 \\ \hline 430050 \end{array}$$

Put the decimal point 4 places from the right.

$$\begin{array}{r}
 + 430050 \\
 \hline
 44.7252
 \end{array}$$

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

$$\frac{696}{100} \div \frac{16}{10} = \frac{696}{100} \times \frac{10}{16} = \frac{87}{20} = 4.35 \text{ g}$$

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

$$10659 \div \frac{17}{10} = 10659 \times \frac{10}{17} = 6270 \text{ c}\ell$$

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

$$\frac{8968}{100} \div \frac{12}{100} = \frac{8968}{100} \times \frac{100}{12} = \frac{2242}{3} = 747.33 \ell$$

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

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

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

$$\frac{1092}{10} \div \frac{13}{100} = \frac{1092}{10} \times \frac{100}{13} = 840 \text{ kg}$$

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

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