Prepared by -Pranjali Patil L-8 Decimals

Exercise 8.1

Solution:

(a) 0.3 or 0.4

$$0.3 = \frac{3}{10} \text{ and } 0.4 = \frac{4}{10}$$

Here, $\frac{3}{10} < \frac{4}{10}$

∴ 0.4 is greater than 0.3

(b) 0.07 or 0.02

$$0.07 = \frac{7}{100} \text{ and } 0.02 = \frac{2}{100}$$

Here, $\frac{7}{100} > \frac{2}{100}$

∴ 0.07 is greater than 0.02.

(c) 3 or 0.8

3 is greater than 0 and 0 > 0.8

∴ 3 is greater than 0.8.

(d) 0.5 or 0.05

$$0.5 = 0.50 = \frac{50}{100} \text{ and } 0.05 = \frac{5}{100}$$

Here, $\frac{50}{100} > \frac{5}{100}$

∴ 0.5 is greater than 0.05.

(e) 1.23 or 1.2

$$1.23 = \frac{123}{100} \text{ and } 1.2 = \frac{12}{10} = \frac{120}{100}$$

Here, $\frac{123}{100} > \frac{120}{100}$

∴ 1.23 is greater than 1.2

(f) 0.099 or 0.19

$$0.099 = \frac{99}{1000} \text{ and } 0.19 = \frac{19}{100} = \frac{190}{1000}$$

$$\text{Here, } \frac{99}{1000} < \frac{190}{1000}$$

∴ 0.19 is greater than 0.099.

(g) 1.5 or 1.50

$$1.5 = \frac{1.5}{10} = \frac{150}{100} \text{ and } 1.50 = \frac{150}{100}$$

$$\text{Here, } \frac{150}{100} = \frac{150}{100}$$

∴ 1.5 is greater than 1.50.

(h) 1.431 or 1.490

$$1.431 = \frac{1431}{1000} \text{ and } 1.490 = \frac{1490}{1000}$$

$$\text{Here, } \frac{1431}{1000} < \frac{1490}{1000}$$

∴ 1.490 is greater than 1.431.

(i) 3.3 or 3.300

$$3.3 = 3.300 = \frac{3300}{1000}$$

$$\text{and } 3.300 = \frac{3300}{1000}$$

$$\text{Here, } \frac{3300}{1000} = \frac{3300}{1000}$$

∴ 3.3 is greater than 3.300.

(j) 5.64 or 5.603

$$5.64 = 5.640 = \frac{5640}{1000}$$

$$\text{and } 5.603 = \frac{5603}{1000}$$

$$\text{Here, } \frac{5640}{1000} > \frac{5603}{1000}$$

∴ 5.64 is greater than 5.603.

Solution:

(a) 5 paise $= 5 \times \frac{1}{100} = 0.05$ [$\because$ 100 paise = ₹ 1]

So, 5 paise = ₹ 0.05

(b) 75 paise $= 75 \times \frac{1}{100} = 0.75$

[$\because$ 100 paise = ₹ 1]

So, 75 paise = ₹ 0.75

(c) 20 paise $= 20 \times \frac{1}{100} = 0.20$

[$\because$ 100 paise = ₹ 1]

So, 20 paise = ₹ 0.20

(d) 50 rupees 90 paise

$= \left(₹50 + ₹\frac{90}{100}\right) = ₹\left(50 + \frac{0.90}{100}\right)$

[$\because$ 100 paise = ₹ 1]

= ₹ (50 + 0.90)

So, 50 rupees 90 paise = ₹ 50.90

(e) 725 paise = ₹ $725 \times \frac{1}{100}$

[$\because$ 100 paise = ₹ 1]

= ₹7.25

So, 725 paise = ₹7.25

Ex 8.2

Express as metres using decimals,

(a) 15cm

(b) 6cm

(c) 2m 45cm

(d) 9m 7cm

(e) 419 cm

Solution:

(a) $15\text{ cm} = 15 \times \frac{1}{100}\text{ m} = 0.15\text{ m}$

[$\because$ 100 cm = 1 m]

So, 15 cm = 0.15 m

(b) $6\text{ cm} = 6 \times \frac{1}{100}\text{ m} = 0.06\text{ m}$

[$\because$ 100 cm = 1 m]

So, 6 cm = 0.06 m

(c) $2\text{ m } 45\text{ cm} = 2\text{ m} + \frac{45}{100}\text{ m}$

[$\because$ 100 cm = 1 m]

$= \left(2 + \frac{45}{100}\right)\text{m} = (2 + 0.45)\text{ m}$

$= 2.45\text{ m}$

So, 2 m 45 cm = 2.45 m

(d) $9\text{ m } 7\text{ cm} = \left(9\text{ m} + \frac{7}{100}\text{ m}\right)$ [$\because$ 100 cm = 1 m]

$= \left(9 + \frac{7}{100}\right)\text{m} = (9 + 0.07)\text{ m}$

$= 9.07\text{ m}$

So, 9 m 7 cm = 9.07 m

(e) $419\text{ cm} = 419 \times \frac{1}{100}\text{ m}$ [$\because$ 100 cm = 1 m]

$= 4.19\text{ m}$

So, 419 cm = 4.19 m

Ex 8.2

Express as cm using decimals.

(a) 5 mm

(b) 60 mm

(c) 164 mm

(d) 9 cm 8 mm

(e) 93 mm

Solution:

$(a)\ 5\ \text{mm} = 5 \times \frac{1}{10} = 0.5\ \text{cm}\ [\because\ 10\ \text{mm} = 1\ \text{cm}]$

So, 5 mm = 0.5 cm

$(b)\ 60\ \text{mm} = 60 \times \frac{1}{10} = 6.0\ \text{cm}$

$[\because\ 10\ \text{mm} = 1\ \text{cm}]$

So, 60 mm = 6.0 cm

$(c)\ 164\ \text{mm} = 164 \times \frac{1}{10} = 16.4\ \text{cm}$

$[\because\ 10\ \text{mm} = 1\ \text{cm}]$

So, 164 mm = 16.4 cm

$(d)\ 9\ \text{cm}\ 8\ \text{mm} = 9\ \text{cm} + 8 \times \frac{1}{10}\ \text{cm}$

$[\because\ 10\ \text{mm} = 1\ \text{cm}]$

$= \left(9 + \frac{8}{10}\right)\ \text{cm} = (9 + 0.8)\ \text{cm}$

$= 9.8\ \text{cm}$

So, 9 cm 8 mm = 9.8 cm.

$(e)\ 93\ \text{mm} = 93 \times \frac{1}{10}\ \text{cm} = 9.3\ \text{cm}$

$[\because\ 10\ \text{mm} = 1\ \text{cm}]$

So, 93 mm = 9.3 cm.

Express as km using decimals.
(a) 8 m
(b) 88 m
(c) 8888 m
(d) 70km 5m
Solution:

$(a)\ 8\ \text{m} = 8 \times \frac{1}{1000} = 0.008\ \text{km}$

$[\because\ 1000\ \text{m} = 1\ \text{km}]$

So, 8 m = 0.008 km

$(b)\ 88\ \text{m} = 88 \times \frac{1}{1000} = 0.088\ \text{km}$

$[\because\ 1000\ \text{m} = 1\ \text{km}]$

So, 88 m = 0.088 km

$(c)\ 8888\ \text{m} = 8888 \times \frac{1}{1000} = 8.888\ \text{km}$

$[\because\ 1000\ \text{m} = 1\ \text{km}]$

So, 8888 m = 8.888 km

$(d)\ 70\ \text{km}\ 5\ \text{m} = \left(70\ \text{km} + \frac{5}{1000}\ \text{km}\right)$

$[\because\ 1000\ \text{m} = 1\ \text{km}]$

$= \left(70 + \frac{5}{1000}\right)\ \text{km}$

$= (70 + 0.005)\ \text{km} = 70.005\ \text{km}$

So, 70 km 5 m = 70.005 km.

Ex 8.2 Class 6 Maths Question 5.

Express as kg using decimals.

(a) 2 g

(b) 100 g

(c) 3750 g

(d) 5 kg 8 g

(e) 26 kg 50 g

Solution:

$(a)\ 2\ \text{g} = 2 \times \frac{1}{1000}\ \text{kg} = 0.002\ \text{kg}$

$[\because\ 1000\ \text{g} = 1\ \text{kg}]$

So, 2 g = 0.002 kg

$(b)\ 100\ \text{g} = 100 \times \frac{1}{1000}\ \text{kg} = 0.100\ \text{kg}$

$[\because\ 1000\ \text{g} = 1\ \text{kg}]$

So, 100 g = 0.100 kg

$(c)\ 3750\ \text{g} = 3750 \times \frac{1}{1000}\ \text{kg} = 3.750\ \text{kg}$

$[\because 1000\ \text{g} = 1\ \text{kg}]$

So, 3750 g = 3.750 kg

$(d)\ 5\ \text{kg}\ 8\ \text{g} = \left(5\ \text{kg} + \frac{8}{1000}\ \text{kg}\right)$

$[\because\ 1000\ \text{g} = 1\ \text{kg}]$

$= \left(5 + \frac{8}{1000}\right)\ \text{kg} = (5 + 0.008)\ \text{kg}$

$= 5.008\ \text{kg}$

So, 5 kg 8 g = 5.008 kg

$(e)\ 26\ \text{kg}\ 50\ \text{g} = 26\ \text{kg} + \frac{50}{1000}\ \text{kg}$

$[\because\ 1000\ \text{g} = 1\ \text{kg}]$

$= \left(26 + \frac{50}{1000}\right)\ \text{kg}$

$= (26 + 0.050)\ \text{kg} = 26.050\ \text{kg}$

So, 26 kg 50 g = 26.050 kg

Ex 8.3 Class 6 Maths Question 1.
Find the sum in each of the following:
(a) 0.007 + 8.5 + 30.08
(b) 15 + 0.632 + 13.8
(c) 27.076 + 0.55 + 0.004
(d) 25.65 + 9.005 + 3.7
(e) 0.75 + 10.425 + 2
(f) 280.69 + 25.2 + 38
Solution:
(a) 0.007 + 8.5 + 30.08
= 0.007 + 8.500 + 30.080 (making like decimals)
= 38.587

$$\begin{array}{r} 0.007 \\ 8.500 \\ +\ 30.080 \\ \hline 38.587 \end{array}$$

(b) 15 + 0.632 + 13.8
= 15.000 + 0.632 + 13.800 (making like decimals)
= 29.432

$$\begin{array}{r} 15.000 \\ 0.632 \\ 13.800 \\ \hline 29.432 \end{array}$$

(c) 27.076 + 0.55 + 0.004
= 27.076 + 0.550 + 0.004 (making like decimals)
= 27.630

$$\begin{array}{r} 27.076 \\ 0.550 \\ +\ 0.004 \\ \hline 27.630 \end{array}$$

(d) 25.65 + 9.005 + 3.7
= 25.650 + 9.005 + 3.700 (making like decimals)
= 38.355

$$\begin{array}{r} 25.650 \\ 9.005 \\ +\ 3.700 \\ \hline 38.355 \end{array}$$

(e) 0.75 + 10.425 + 2
= 0.750 + 10.425 + 2.000 (making like decimals)

= 13.175

$$\begin{array}{r} 0.750 \\ 10.425 \\ +\ 2.000 \\ \hline 13.175 \end{array}$$

(f) 280.69 + 25.2 + 38
= 280.69 + 25.20 + 38.00 (making like decimals)
= 343.89

$$\begin{array}{r} 280.69 \\ 25.20 \\ +\ 38.00 \\ \hline 343.89 \end{array}$$

Ex 8.3 Class 6 Maths Question 2.
Rashid spent ₹35.75 for Maths book and ₹32.60 for Science book. Find the total amount spent by Rashid.
Solution:
Money spent by Rashid for Maths book = ₹35.75
Money spent by Rashid for Science book = ₹32.60
∴ Total money spent by Rashid on both books = ₹35.75 + ₹32.60 = ₹68.35

$$\begin{array}{r} 35.75 \\ +\ 32.60 \\ \hline 68.35 \end{array}$$

Ex 8.3 Class 6 Maths Question 3.
Radhika's mother gave her ₹10.50 and her father gave her ₹15.80, find the total amount given to Radhika by her parents.
Solution:
Money given by Radhika's mother = ₹10.50
Money given by her father = ₹15.80
∴ Total money given to her by her parents
= ₹10.50 + ₹15.80 = ₹26.30

$$\begin{array}{r} 10.50 \\ +\ 15.80 \\ \hline 26.30 \end{array}$$

Ex 8.3 Class 6 Maths Question 4.
Nasreen bought 3 m 20 cm cloth for her shirt and 2 m 5 cm cloth for her trouser. Find the total length of cloth bought by her.
Solution:
Length of cloth bought by Nasreen for her shirt = 3 m 20 cm = 3.20 m
Length of cloth brought by her for her trouser = 2 m 5 cm = 2.05 m

Total length of cloth bought by her = 3.20 m + 2.05 m = 5.25 m

$$\begin{array}{r} 3.20 \\ +\ 2.05 \\ \hline 5.25 \\ \hline \end{array}$$

Ex 8.3 Class 6 Maths Question 5.
Naresh walked 2 km 35 m in the morning and 1 km 7 m in the evening. How much distance did he walk in all?
Solution:
Distance walked by Naresh in the morning = 2 km 35 m = (2 + $\frac{35}{1000}$) km = 2.035 km.
Distance walked by him in the evening = 1 km 7 m = (1 + $\frac{7}{1000}$) km = 1.007 km
1000)
∴ Total distance walked by him in all
= (2.035 + 1.007) km
= 3.042 km

$$\begin{array}{r} 2.035 \\ +\ 1.007 \\ \hline 3.042 \\ \hline \end{array}$$

Ex 8.3 Class 6 Maths Question 6.
Sunita travelled 15 km 268 m by bus, 7 km 7 m by car and 500 m on foot in order to reach her school. How far is her school from her residence?
Solution:
Distance travelled by Sunita by bus
= 15 km 268 m = (15 + $\frac{268}{1000}$) = 15.268 km
Distance travelled by her by car
= 7 km 7 m = (7 + $\frac{7}{1000}$) km
= 7.007km
Ex 8.6 Class 6 Maths Question 1.
Subtract:
(a) ₹18.25 from ₹20.75
(b) 202.54 m from 250 m
(c) ₹5.36 from ₹8.40
(d) 2.051 km from 5.206 km
(e) 0.314 kg from 2.107 kg
Solution:
(a) ₹18.25 from 20.75
= 20.75 – 18.25
= 2.50

$$\begin{array}{r} 20.75 \\ -18.25 \\ \hline 2.50 \\ \hline \end{array}$$

(b) 202.54 m from 250 m
= 250 m – 202.54 m
= 250.00 m – 202.54 m

= 47.46 m

$$\begin{array}{r} {}^{4}\cancel{2}\,{}^{9}\cancel{5}\,{}^{9}\cancel{0}.{}^{10}\cancel{0}\,\cancel{0} \\ -\,2\,0\,2.\,5\,4 \\ \hline 4\,7.\,4\,6 \end{array}$$

(c) ₹5.36 from ₹8.40
= ₹8.40 – ₹5.36
= ₹3.04

$$\begin{array}{r} 8.{}^{3}\cancel{4}\,{}^{10}\cancel{0} \\ -\,5.\,3\,6 \\ \hline 3.\,0\,4 \end{array}$$

(d) 2.051 km from 5.206 km
= 5.206 km – 2.051 km
= 3.155 km

$$\begin{array}{r} 5.{}^{1}\cancel{2}\,{}^{10}\cancel{0}\,6 \\ -\,2.\,0\,5\,1 \\ \hline 3.\,1\,5\,5 \end{array}$$

(e) 0.314 kg from 2.107 kg
= 2.107 kg – 0.314 kg
= 1.793 kg

$$\begin{array}{r} {}^{1}2.{}^{0}\cancel{1}\,{}^{10}\cancel{0}\,7 \\ -\,0.\,3\,1\,4 \\ \hline 1.\,7\,9\,3 \end{array}$$

Ex 8.4 Class 6 Maths Question 2.
Find the value of:
(a) 9.756 – 6.28
(b) 21.05 – 15.27
(c) 18.5 – 6.79
(d) 11.6 – 9.847
Solution:
(a) We have 9.756 – 6.25
= 9.756 – 6.250
= 3.506

$$\begin{array}{r} 9.\,7\,5\,6 \\ -\,6.\,2\,5\,0 \\ \hline 3.\,5\,0\,6 \end{array}$$

(b) We have 21.05 – 15.27
= 5.78

$$\begin{array}{r} {}^{1}\,{}^{10}\,{}^{10\to 9}\,{}^{15} \\ 21.05 \\ -15.27 \\ \hline 5.78 \\ \hline \end{array}$$

(c) We have 18.5 – 6.79
= 18.50 – 6.79
= 11.71

$$\begin{array}{r} {}^{7}\;\;{}^{14}\,{}^{10} \\ 18.50 \\ 6.79 \\ \hline 11.71 \\ \hline \end{array}$$

(d) 11.6 – 9.847
= 11.600 – 9.847
= 1.753

$$\begin{array}{r} {}^{0}\;\;{}^{15}\,{}^{9}\,{}^{10} \\ 11.600 \\ -\;\;9.847 \\ \hline 1.753 \\ \hline \end{array}$$

Ex 8.4 Class 6 Maths Question 3.
Raju bought a book for ₹35.65. He gave ₹50 to the shopkeeper. How much money did he get back from the shopkeeper?
Solution:
Cost of book = ₹35.65
Money paid by him to the shopkeeper = ₹50
∴ Money got back by him
= ₹50 – ₹35.65
= ₹50.00 – ₹35.65
= ₹14.35

$$\begin{array}{r} {}^{4}\,{}^{9}\;\;{}^{9}\,{}^{10} \\ 50.00 \\ -35.65 \\ \hline 14.35 \\ \hline \end{array}$$

Ex 8.6 Class 6 Maths Question 4.
Rani had ₹18.50. She bought one ice-cream for ₹11.75. How much money does she have now?
Solution:
Money Rani had ₹18.50
She bought ice-cream for ₹11.75

∴ Money left with Rani = ₹ 18.50 – ₹11.75 = ₹6.75

$$\begin{array}{r} {}^{7}\,{}^{14}\,{}^{10} \\ 1\not{8}.\not{5}\not{0} \\ -11.75 \\ \hline 6.75 \end{array}$$

Ex 8.4 Class 6 Maths Question 5.
Tina had 20 m 5 cm long cloth. She cuts 4 m 50 cm length of cloth from this for making a curtain. How much cloth is left with her?
Solution:
Length of cloth had by Tina = 20 m 5 cm = 20.05 m
Length of cloth cut by her = 4 m 50 cm
= 4.50 m
∴ Length of cloth left with her = 20.05 m -4.50 m
= 15.55 m

$$\begin{array}{r} {}^{1}\,{}^{9}\,{}^{1}\,{}^{0} \\ 2\not{0}.\not{0}5 \\ -\ 4.50 \\ \hline 15.55 \end{array}$$

Ex 8.4 Class 6 Maths Question 6.
Namita travels 20 km 50 m every day. Out of this she travels 10 km 200 m by bus and the rest by auto. How much distance does she travel by auto?
Solution:
Distance travelled by Namita daily = 20 km 50 m or 20.050 km
Distance travelled by her by bus = 10 km 200 m or 10.200 km
∴ Distance travelled by her by auto = (20.050 – 10.200) km = 9.850 km

$$\begin{array}{r} {}^{1}\,{}^{9}\,{}^{10} \\ 2\not{0}.\not{0}50 \\ -10.200 \\ \hline 9.850 \end{array}$$

Ex 8.4Class 6 Maths Question 7.
Aakash bought vegetables weighing 10 kg. Out of this, 3 kg 500 g is onions, 2 kg 75 g is tomatoes and the rest is potatoes. What is the weight of the potatoes?
Solution:
Weight of vegetables bought by Aakash = 10 kg
Weight of onions bought by him = 3 kg 500 g
= 3.500 kg
and weight of tomatoes bought by him = 2 kg 75 g = 2.075 kg
∴ Weight of potatoes = Weight of vegetable – (weight of onions + weight of tomatoes)
= 10.000 – (3.500 + 2.075)
= 10.000 – 5.575 = 4.425 kg