

Decimals

Exercise-1

1. $\frac{1}{10}, \frac{9}{100}, \frac{19}{10}, \frac{157}{1000}$

2. (a) $\frac{9}{10} = 9 \times \frac{1}{10} = 9 \times 0.1 = 0.9$

(b) $\frac{5}{10} = 5 \times \frac{1}{10} = 5 \times 0.1 = 0.5$

(c) $7 \frac{1}{10} = \frac{71}{10} = 71 \times \frac{1}{10} = 71 \times 0.1 = 7.1$

(d) $14 \frac{3}{10} = \frac{143}{10} = 14.3$

(e) $\frac{15}{100} = 0.15$

(f) $\frac{73}{100} = 0.73$

(g) $3 \frac{17}{100} = \frac{317}{100} = 3.17$

(h) $42 \frac{3}{100} = \frac{4203}{100} = 42.03$

(i) $\frac{127}{1000} = 0.127$

(j) $\frac{519}{1000} = 0.519$

(k) $1 \frac{177}{1000} = \frac{1177}{1000} = 1.177$

(l) $32 \frac{19}{1000} = \frac{32019}{1000} = 32.019$

3. (a) $0.3 = \frac{3}{10}$

(b) $0.7 = \frac{7}{10}$

(c) $0.45 = \frac{45}{100}$

(d) $0.092 = \frac{92}{1000}$

(e) $2.7 = \frac{27}{10} = 2 \frac{7}{10}$

(f) $3.08 = \frac{308}{100} = 3 \frac{8}{100}$

(g) $15.008 = \frac{15008}{1000} = 15 \frac{8}{1000}$

(h) $92.170 = \frac{92170}{1000} = 92 \frac{170}{1000}$

4. (a) 1.3

(b) 0.008

(c) 25.342

(d) 158.058

(e) 75.225

(f) 45.03

(g) 99.99

5. (a) Ninety eight hundredths

(b) Three and sixty two hundredths

(c) Four hundred fifty seven thousandths

(d) Nineteen and two hundred fifty six thousandths

- (e) Eight and seventy five thousandths
- (f) Five hundred thirty five thousandths
- (g) Two hundred twenty two thousandths
- (h) Ninety nine and ninety nine thousandths
- (i) Eighty five and eight tenths
- (j) Twenty three and fifteen thousandths
- (k) Forty eight and forty five hundredths
- (l) One hundred sixty five and twenty seven hundredths

Exercise-2

1. (a) Place value of 6 = $6 \times 1 = 6$,
 Place value of 0 = 0,
 Place value of 3 = $3 \times \frac{1}{100} = \frac{3}{100}$.

(b) Place value of 1 = $1 \times 10 = 10$,
 Place value of 9 = $9 \times 1 = 9$,
 Place value of 2 = $2 \times \frac{1}{10} = \frac{2}{10}$,
 Place value of 5 = $5 \times \frac{1}{100} = \frac{5}{100}$.

(c) Place value of 4 = $4 \times 100 = 400$,
 Place value of 3 = $3 \times 10 = 30$,
 Place value of 5 = $5 \times 1 = 5$,
 Place value of 0 = 0,
 Place value of 7 = $7 \times \frac{1}{100} = \frac{7}{100}$,
 Place value of 5 = $5 \times \frac{1}{1000} = \frac{5}{1000}$.

(d) Place value of 1 = $1 \times 1000 = 1000$,
 Place value of 7 = $7 \times 100 = 700$,
 Place value of 3 = $3 \times 10 = 30$,
 Place value of 8 = $8 \times 1 = 8$,
 Place value of 1 = $1 \times \frac{1}{10} = \frac{1}{10}$,
 Place value of 3 = $3 \times \frac{1}{100} = \frac{3}{100}$.

$$\text{Place value of } 5 = 5 \times \frac{1}{1000} = \frac{5}{1000}.$$

(e) $\text{Place value of } 3 = 3 \times 1000 = 3000,$

$$\text{Place value of } 5 = 5 \times 100 = 500,$$

$$\text{Place value of } 4 = 4 \times 10 = 40,$$

$$\text{Place value of } 7 = 7 \times 1 = 7,$$

$$\text{Place value of } 1 = 1 \times \frac{1}{10} = \frac{1}{10},$$

$$\text{Place value of } 8 = 8 \times \frac{1}{100} = \frac{8}{100}.$$

(f) $\text{Place value of } 7 = 7 \times 10 = 70,$

$$\text{Place value of } 2 = 2 \times 1 = 2,$$

$$\text{Place value of } 0 = 0 \times \frac{1}{10} = 0,$$

$$\text{Place value of } 7 = 7 \times \frac{1}{100} = \frac{7}{100},$$

$$\text{Place value of } 5 = 5 \times \frac{1}{1000} = \frac{5}{1000}.$$

(g) $\text{Place value of } 1 = 1 \times 10 = 10,$

$$\text{Place value of } 1 = 1 \times 1 = 1,$$

$$\text{Place value of } 0 = 0 \times \frac{1}{10} = 0,$$

$$\text{Place value of } 0 = 0 \times \frac{1}{100} = 0,$$

$$\text{Place value of } 5 = 5 \times \frac{1}{1000} = \frac{5}{1000}.$$

(h) $\text{Place value of } 9 = 9 \times 100 = 900,$

$$\text{Place value of } 2 = 2 \times 10 = 20,$$

$$\text{Place value of } 7 = 7 \times 1 = 7,$$

$$\text{Place value of } 7 = 7 \times \frac{1}{10} = \frac{7}{10},$$

$$\text{Place value of } 2 = 2 \times \frac{1}{100} = \frac{2}{100},$$

$$\text{Place value of } 9 = 9 \times \frac{1}{1000} = \frac{9}{1000}.$$

2. (a) $9.259 = 9 + 0.2 + 0.05 + 0.009$

$$= 9 + \frac{2}{10} + \frac{5}{100} + \frac{9}{1000}$$

(decimal form)

(fraction form)

$$(b) \quad 32.54 = 30 + 2 + 0.5 + 0.04$$

$$= 30 + 2 + \frac{5}{10} + \frac{4}{100}$$

(decimal form)

(fraction form)

$$(c) \quad 247.06 = 200 + 40 + 7 + 0.06$$

$$= 200 + 40 + 7 + \frac{6}{100}$$

(decimal form)

(fraction form)

$$(d) \quad 0.875 = 0.8 + 0.07 + 0.005$$

$$= \frac{8}{10} + \frac{7}{100} + \frac{5}{1000}$$

(decimal form)

(fraction form)

$$3. (a) \quad 40 + 5 + \frac{3}{10} + \frac{9}{1000} = 40 + 5 + 0.3 + 0.009 = 45.309$$

$$(b) \quad 900 + 20 + 9 + \frac{9}{100} + \frac{2}{1000} = 900 + 20 + 9 + 0.09 + 0.002 = 929.092$$

$$(c) \quad 70 + 2 + \frac{1}{10} + \frac{2}{100} + \frac{3}{1000} = 70 + 2 + 0.1 + 0.02 + 0.003 = 72.123$$

$$(d) \quad 80 + \frac{2}{10} + \frac{4}{100} + \frac{6}{1000} = 80 + 0.2 + 0.04 + 0.006 = 80.246$$

$$(e) \quad 300 + 20 + 1 + 0.1 + 0.02 = 321.12$$

$$(f) \quad 50 + 5 + 0.5 + 0.05 + 0.005 = 55.555$$

Exercise-3

1. (a) Maximum number of decimal places in given numbers is 3.

Thus, each of these decimals have to be converted to decimal with three decimal places.

$$5.8 = 5.800, \quad 79.25 = 79.250, \quad 0.008 = 0.008$$

Thus, 5.800, 79.250 and 0.008 are like decimals.

- (b) Maximum number of decimal places in given numbers is 3.

Thus, each of these decimals have to be converted to decimal with three decimal places.

$$0.6 = 0.600, \quad 3.519 = 3.519, \quad 5.38 = 5.380, \quad 9.7 = 9.700$$

Thus, 0.600, 3.519, 5.380 and 9.700 are like decimals.

- (c) Converting each decimal number to decimal with 3 decimal places, we get

$$1.8 = 1.800, \quad 0.07 = 0.070, \quad 3.2 = 3.200, \quad 2.026 = 2.026$$

Thus, 1.800, 0.070, 3.200 and 2.026 are like decimals.

- (d) Converting each decimal number to decimal with 3 decimal places, we get

$$9.1 = 9.100, 31.37 = 31.370, 47.506 = 47.506, 130.358 = 130.358$$

Thus, 9.100, 31.370, 47.506 and 130.358 are like decimals.

2. (a) The whole number part is greater in 53.7 than to 35.7.
 $\therefore 53.7 > 35.7$

- (b) Converting into like decimals, $19.705 \rightarrow 19.705, 19.75 \rightarrow 19.750$
 As the whole number parts are same, we compare the decimal parts.
 Since, 0 hundredths < 5 hundredths
 $\therefore 19.705 < 19.75$

- (c) Converting into like decimals, we have $0.01 = 0.010, 0.010 = 0.010$
 $\therefore 0.01 = 0.010$

- (d) Since whole number part is greater in 88.88 than to 8.88,
 $\therefore 8.88 < 88.88$

3. (a) Arranging the given decimals in place value chart, we have

Decimal number	Ones	Point	Tenths	Hundredths	Thousandths
6.3	6	.	3	0	0
2.4	2	.	4	0	0
5.37	5	.	3	7	0
8.14	8	.	1	4	0
6.03	6	.	0	3	0

Comparing according to the place value, we have decimal numbers in ascending order as $2.4 < 5.37 < 6.03 < 6.3 < 8.14$

- (b) Arranging the given decimals in place value chart, we have

Decimal number	Ones	Point	Tenths	Hundredths	Thousandths
0.9	0	.	9	0	0
0.009	0	.	0	0	9
0.09	0	.	0	9	0
9.09	9	.	0	9	0
0.99	0	.	9	9	0

Comparing according to the place value, we have

$$0.009 < 0.09 < 0.9 < 0.99 < 9.09$$

$$(d) \frac{999}{10} = 99 \frac{9}{10} = 99 + \frac{9}{10} = 99 + 0.9 = 99.9$$

$$(e) 8 \frac{3}{4} = \frac{35}{4} \quad 4 \overline{) 35.00}$$

8.75
<u>32</u>
30
<u>-28</u>
20
<u>-20</u>
0

$$(f) \frac{9}{20} = \frac{9 \times 5}{20 \times 5} = \frac{45}{100} = 0.45$$

$$(g) \frac{11}{3} = 3.666$$

$$3 \overline{) 11.000}$$

3.666
<u>9</u>
20
<u>-18</u>
20
<u>-18</u>
20
<u>-18</u>
2

$$(h) \frac{49}{12} = 4.083$$

$$12 \overline{) 49.000}$$

4.083
<u>48</u>
100
<u>-96</u>
40
<u>-36</u>
4

$$(i) 8 \frac{7}{8} = \frac{71}{8} = 8.875$$

$$8 \overline{) 71.000}$$

8.875
<u>64</u>
70
<u>-64</u>
60
<u>-56</u>
40
<u>-40</u>
0

$$(j) 2 \frac{4}{25} = \frac{54}{25} = \frac{54 \times 4}{25 \times 4} = \frac{216}{100} = 2 \frac{16}{100} = 2 + \frac{16}{100} = 2 + 0.16 = 2.16$$

Exercise-5

1. (a) $6.3 + 3.2 = 9.5$

$$\begin{array}{r} 6.3 \\ + 3.2 \\ \hline 9.5 \end{array}$$

(b) $2.47 + 8.28 = 10.75$

$$\begin{array}{r} \textcircled{1} \quad \textcircled{1} \\ 2.47 \\ + 8.28 \\ \hline 10.75 \end{array}$$

$$(c) 16.468 + 31.03 = 47.498$$

$$\begin{array}{r} 16.468 \\ + 31.030 \\ \hline 47.498 \end{array}$$

$$(d) 325.8 + 89.097 + 0.78 = 415.677$$

$$\begin{array}{r} \textcircled{1}\textcircled{1}\textcircled{1} \textcircled{1} \\ 325.800 \\ + 89.097 \\ + 0.780 \\ \hline 415.677 \end{array}$$

$$(e) 111.111 + 11.11 + 1.1 + 0.001 = 123.322$$

$$\begin{array}{r} 111.111 \\ 11.110 \\ 1.100 \\ + 0.001 \\ \hline 123.322 \end{array}$$

$$(f) 153.6 + 96.87 + 8.974 + 0.13 = 259.574$$

$$\begin{array}{r} \textcircled{1}\textcircled{1}\textcircled{2} \textcircled{1} \\ 153.600 \\ + 96.870 \\ + 8.974 \\ + 0.130 \\ \hline 259.574 \end{array}$$

$$2. (a) 1.7 - 0.55 = 1.15$$

$$\begin{array}{r} \textcircled{6}\textcircled{10} \\ 1.70 \\ - 0.55 \\ \hline 1.15 \end{array}$$

$$(b) 53.72 - 38.4 = 15.32$$

$$\begin{array}{r} \textcircled{4}\textcircled{13} \\ 53.72 \\ - 38.40 \\ \hline 15.32 \end{array}$$

$$(c) 2.015 - 0.78 = 1.235$$

$$\begin{array}{r} \textcircled{9} \\ \textcircled{1} \textcircled{10} \textcircled{11} \\ 2.015 \\ - 0.780 \\ \hline 1.235 \end{array}$$

$$(d) 4.01 - 0.381 = 3.629$$

$$\begin{array}{r} \textcircled{9} \\ \textcircled{3} \textcircled{10} \textcircled{10} \textcircled{10} \\ 4.010 \\ - 0.381 \\ \hline 3.629 \end{array}$$

$$(e) 33.6 - 3.637 = 29.963$$

$$\begin{array}{r} \textcircled{12} \textcircled{15} \textcircled{9} \\ \textcircled{2} \textcircled{2} \textcircled{8} \textcircled{10} \textcircled{10} \\ 33.600 \\ - 3.637 \\ \hline 29.963 \end{array}$$

$$(f) 100 - 86.713 = 13.287$$

$$\begin{array}{r} \textcircled{9} \textcircled{9} \textcircled{9} \textcircled{9} \\ \textcircled{0} \textcircled{10} \textcircled{10} \textcircled{10} \textcircled{10} \\ 100.000 \\ - 86.713 \\ \hline 13.287 \end{array}$$

$$(g) \quad 2.05 - 0.38 = 1.67$$

$$\begin{array}{r} \textcircled{1} \quad \textcircled{9} \quad \textcircled{10} \quad \textcircled{15} \\ 2 \cdot \cancel{0} \cancel{5} \\ - 0 \cdot 38 \\ \hline 1 \cdot 67 \end{array}$$

$$(h) \quad 3.6 - 0.63 = 2.97$$

$$\begin{array}{r} \textcircled{2} \quad \textcircled{15} \quad \textcircled{5} \quad \textcircled{10} \\ 3 \cdot \cancel{6} \cancel{0} \\ - 0 \cdot 63 \\ \hline 2 \cdot 97 \end{array}$$

$$(i) \quad 1.19 - 0.72 = 0.47$$

$$\begin{array}{r} \textcircled{0} \quad \textcircled{11} \\ \cancel{1} \cdot \cancel{1} 9 \\ - 0 \cdot 72 \\ \hline 0 \cdot 47 \end{array}$$

$$3. (a) \quad 16.468 + 3.03 - 12.97 = 19.498 - 12.97 = 6.528$$

$$\begin{array}{r} 16.468 \\ + 3.030 \\ \hline 19.498 \end{array}$$

$$\begin{array}{r} \textcircled{8} \quad \textcircled{14} \\ 1 \cancel{9} \cdot \cancel{4} 98 \\ - 12.970 \\ \hline 6.528 \end{array}$$

$$(b) \quad 76 + 31.75 - 72.208 = 107.75 - 72.208 = 35.542$$

$$\begin{array}{r} \textcircled{1} \\ 76.00 \\ + 31.75 \\ \hline 107.75 \end{array}$$

$$\begin{array}{r} \textcircled{0} \quad \textcircled{10} \quad \textcircled{4} \quad \textcircled{10} \\ \cancel{1} \cancel{0} 7 \cdot 7 \cancel{5} \cancel{0} \\ - 72.208 \\ \hline 35.542 \end{array}$$

$$(c) \quad 777 - 77.7 - 7.777 = 699.3 - 7.777 = 691.523$$

$$\begin{array}{r} \textcircled{6} \quad \textcircled{16} \quad \textcircled{16} \quad \textcircled{10} \\ \cancel{7} \cancel{7} \cancel{7} \cdot \cancel{0} \\ - 77.7 \\ \hline 699.3 \end{array}$$

$$\begin{array}{r} \textcircled{12} \quad \textcircled{9} \quad \textcircled{2} \quad \textcircled{10} \quad \textcircled{10} \\ 69 \cancel{9} \cdot \cancel{3} \cancel{0} \cancel{0} \\ - 7.777 \\ \hline 691.523 \end{array}$$

$$(d) \quad 829 - 325.5 + 21.728 = 850.728 - 325.5 = 525.228$$

$$\begin{array}{r} \textcircled{1} \\ 829.000 \\ + 21.728 \\ \hline 850.728 \end{array}$$

$$\begin{array}{r} \textcircled{4} \quad \textcircled{10} \\ 8 \cancel{5} \cancel{0} \cdot 728 \\ - 325.500 \\ \hline 525.228 \end{array}$$

$$(e) \quad 205.3 - 34.76 - 8.99 = 170.54 - 8.99 \\ = 161.55$$

$$\begin{array}{r} \textcircled{1} \textcircled{10} \textcircled{4} \quad \textcircled{12} \textcircled{2} \textcircled{10} \\ 2 \cancel{0} \cancel{5} . \cancel{3} \cancel{0} \\ - 34 . 76 \\ \hline 170 . 54 \end{array} \quad \begin{array}{r} \textcircled{9} \textcircled{14} \\ 1 \cancel{7} \cancel{0} . \cancel{5} \cancel{4} \\ - 8 . 99 \\ \hline 161 . 55 \end{array}$$

$$(f) \quad 0.176 + 27.46 - 24.675 = 27.636 - 24.675 \\ = 2.961$$

$$\begin{array}{r} \textcircled{1} \\ 0 . 176 \\ + 27 . 460 \\ \hline 27 . 636 \end{array} \quad \begin{array}{r} \textcircled{15} \\ 2 \cancel{7} . \cancel{6} \cancel{3} 6 \\ - 24 . 675 \\ \hline 2 . 961 \end{array}$$

$$4. \quad \begin{array}{r} \textcircled{3} \textcircled{10} \quad \textcircled{9} \textcircled{10} \\ \cancel{4} \cancel{0} . \cancel{0} \cancel{0} \\ - 25 . 56 \\ \hline 14 . 44 \end{array}$$

14.44 should be subtracted from 40 to get 25.56.

$$5. \quad \text{The sum of } 43.57 \text{ and } 24.055 = 67.625$$

$$\begin{array}{r} \textcircled{1} \\ 43 . 570 \\ + 24 . 055 \\ \hline 67 . 625 \end{array}$$

$$6. \quad \begin{array}{r} \textcircled{6} \textcircled{10} \quad \textcircled{9} \textcircled{10} \\ \cancel{7} \cancel{0} . \cancel{0} \cancel{0} \\ - 56 . 48 \\ \hline 13 . 52 \end{array}$$

13.52 should be added to 56.48 to get 70.

$$7. \quad \begin{array}{r} \textcircled{6} \textcircled{12} \\ 96 . \cancel{7} \cancel{2} 5 \\ - 45 . 050 \\ \hline 51 . 675 \end{array}$$

96.725 should be decreased by 51.675 to get 45.05.

$$8. \quad \text{Total distance covered in the three days} = (2.4 + 3.55 + 2.72) \text{ km} \\ = 8.67 \text{ km}$$

$$\begin{array}{r} \textcircled{1} \\ 2 . 40 \\ 3 . 55 \\ + 2 . 72 \\ \hline 8 . 67 \end{array}$$

So, Mr Mishra walked 8.67 km in the three days.

9. Total money spent by Kajal = ₹125.90 + ₹28.75 + ₹11.50

$$\begin{array}{r} \textcircled{1} \textcircled{2} \\ 125.90 \\ 28.75 \\ + 11.50 \\ \hline 166.15 \end{array}$$

$$= ₹166.15$$

So, Kajal spent ₹166.15 in all.

10. Height of Neem tree = 4.12 m

Height of Gulmohar tree = 5.4 m

Difference in heights = 5.4 m - 4.12 m

$$= 1.28 \text{ m}$$

$$\begin{array}{r} \textcircled{3} \textcircled{10} \\ 5.40 \\ - 4.12 \\ \hline 1.28 \end{array}$$

So, the difference in the heights of the two trees is 1.28 m.

Exercise-6

1. (a) $1 \text{ paisa} = \frac{1}{100} \text{ rupee} = ₹ 0.01$

$$\therefore 44 \text{ paise} = ₹ 0.44$$

(b) $22 \text{ rupees } 72 \text{ paise} = ₹ 22 + ₹ 0.72 = ₹ 22.72$

(c) $230 \text{ rupees } 50 \text{ paise} = ₹ 230 + ₹ 0.50 = ₹ 230.50$

2. (a) $1 \text{ mm} = \frac{1}{10} \text{ cm} = 0.1 \text{ cm}$

$$\therefore 98 \text{ mm} = 98 \times 0.1 \text{ cm} = 9.8 \text{ cm}$$

(b) $72 \text{ mm} = 72 \times 0.1 \text{ cm} = 7.2 \text{ cm}$

(c) $27 \text{ mm} = 27 \times 0.1 \text{ cm} = 2.7 \text{ cm}$

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

$$1 \text{ cm} = \frac{1}{100} \text{ m} = 0.01 \text{ m}$$

$$\therefore 45 \text{ cm} = 45 \times 0.01 \text{ m} = 0.45 \text{ m}$$

(b) $68 \text{ cm} = 68 \times 0.01 \text{ m} = 0.68 \text{ m}$

(c) $24 \text{ m } 75 \text{ cm} = 24 \text{ m} + (75 \times 0.01) \text{ m}$

$$= 24 \text{ m} + 0.75 \text{ m}$$

$$= 24.75 \text{ m}$$

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

$$1 \text{ m} = \frac{1}{1000} \text{ km} = 0.001 \text{ km}$$

$$\begin{aligned}\therefore 5 \text{ km } 205 \text{ m} &= 5 \text{ km} + (205 \times 0.001) \text{ km} \\ &= 5 \text{ km} + 0.205 \text{ km} \\ &= 5.205 \text{ km}\end{aligned}$$

$$\begin{aligned}\text{(b) } 9 \text{ km } 119 \text{ m} &= 9 \text{ km} + (119 \times 0.001) \text{ km} \\ &= 9 \text{ km} + 0.119 \text{ km} \\ &= 9.119 \text{ km}\end{aligned}$$

$$\begin{aligned}\text{(c) } 10 \text{ km } 100 \text{ m} &= 10 \text{ km} + (100 \times 0.001) \text{ km} \\ &= 10 \text{ km} + 0.1 \text{ km} \\ &= 10.1 \text{ km}\end{aligned}$$

5. (a) $1000 \text{ g} = 1 \text{ kg}$

$$1 \text{ g} = \frac{1}{1000} \text{ kg} = 0.001 \text{ kg}$$

$$\therefore 570 \text{ g} = 570 \times 0.001 \text{ kg} = 0.570 \text{ kg}$$

(b) $6 \text{ kg } 230 \text{ g} = 6 \text{ kg} + 230 \text{ g}$

$$= 6 \text{ kg} + (230 \times 0.001) \text{ kg}$$

$$= 6 \text{ kg} + 0.230 \text{ kg}$$

$$= 6.230 \text{ kg}$$

(c) $19 \text{ kg } 110 \text{ g} = 19 \text{ kg} + 110 \text{ g}$

$$= 19 \text{ kg} + (110 \times 0.001) \text{ kg}$$

$$= 19 \text{ kg} + 0.110 \text{ kg}$$

$$= 19.110 \text{ kg}$$

6. (a) $1000 \text{ mL} = 1 \text{ L}$

$$1 \text{ mL} = \frac{1}{1000} \text{ L} = 0.001 \text{ L}$$

$$\therefore 455 \text{ mL} = 455 \times 0.001 \text{ L} = 0.455 \text{ L}$$

$$(b) \quad 6 \ell \ 275 \text{ mL} = 6 \ell + 275 \text{ mL}$$

$$= 6 \ell + (275 \times 0.001) \ell$$

$$= 6 \ell + 0.275 \ell$$

$$= 6.275 \ell$$

$$(c) \quad 46 \text{ mL} = 46 \times 0.001 \ell = 0.046 \ell$$

Mental Maths Corner

- | | | | |
|-------------|-----------|-----------|----------|
| 1. (a) (iv) | (b) (iv) | (c) (iv) | (d) (ii) |
| 2. (a) True | (b) False | (c) False | (d) True |
| (e) False | (f) False | | |

Review Exercise

$$1. (a) \quad \frac{7}{12} = 0.583$$

$$\begin{array}{r} 0.583 \\ 12 \overline{) 7.000} \\ \underline{-60} \\ 100 \\ \underline{-96} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

$$(b) \quad \frac{1}{6} = 0.166$$

$$\begin{array}{r} 0.166 \\ 6 \overline{) 1.000} \\ \underline{-6} \\ 40 \\ \underline{-36} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

$$(c) \quad \frac{63}{100} = 0.63$$

$$(d) \quad \frac{5}{8} = 0.625$$

$$\begin{array}{r} 0.625 \\ 8 \overline{) 5.000} \\ \underline{-48} \\ 20 \\ \underline{-16} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

$$2. (a) \quad \text{Place value of 3 in } 108.73 = 3 \times \frac{1}{100} = \frac{3}{100}$$

$$(b) \quad \text{Place value of 2 in } 17.023 = 2 \times \frac{1}{100} = \frac{2}{100}$$

$$(c) \quad \text{Place value of 3 in } 0.368 = 3 \times \frac{1}{10} = \frac{3}{10}$$

$$(d) \quad \text{Place value of 1 in } 2.001 = 1 \times \frac{1}{1000} = \frac{1}{1000}$$

$$3. (a) 7.77 = 7 + \frac{7}{10} + \frac{7}{100}$$

(fraction form)

$$= 7 + 0.7 + 0.07$$

(decimal form)

$$(b) 6.231 = 6 + \frac{2}{10} + \frac{3}{100} + \frac{1}{1000}$$

(fraction form)

$$= 6 + 0.2 + 0.03 + 0.001$$

(decimal form)

$$(c) 11.013 = 11 + \frac{1}{100} + \frac{3}{1000}$$

(fraction form)

$$= 11 + 0.01 + 0.003$$

(decimal form)

$$(d) 8.502 = 8 + \frac{5}{10} + \frac{2}{1000}$$

(fraction form)

$$= 8 + 0.5 + 0.002$$

(decimal form)

$$4. (a) > \quad (b) > \quad (c) > \quad (d) =$$

$$(e) > \quad (f) <$$

$$5. (a) 3.649 = \frac{3649}{1000}$$

$$(b) 5.16 = \frac{516}{100}$$

$$(c) 1.23 = \frac{123}{100}$$

$$(d) 11.479 = \frac{11479}{1000}$$

$$(e) 3.333 = \frac{3333}{1000}$$

$$(f) 0.124 = \frac{124}{1000}$$

$$(g) 12.43 = \frac{1243}{100}$$

$$(h) 6.708 = \frac{6708}{1000}$$

$$6. (a) 2.9 + 0.67 + 68.58 = 72.15$$

$$\begin{array}{r} \textcircled{1} \textcircled{2} \quad \textcircled{1} \\ 2 \quad . \quad 9 \quad 0 \\ 0 \quad . \quad 6 \quad 7 \\ + 6 \quad 8 \quad . \quad 5 \quad 8 \\ \hline 7 \quad 2 \quad . \quad 1 \quad 5 \end{array}$$

$$(b) 2.72 + 31.5 + 425.71 = 459.93$$

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

$$7. (a) 192.01 - 157.075 = 34.935$$

$$\begin{array}{r} \textcircled{11} \quad \textcircled{9} \quad \textcircled{10} \\ \textcircled{8} \quad \textcircled{2} \quad \textcircled{10} \quad \textcircled{8} \quad \textcircled{10} \\ 1 \quad 9 \quad 2 \quad . \quad 0 \quad 1 \quad 0 \\ - 1 \quad 5 \quad 7 \quad . \quad 0 \quad 7 \quad 5 \\ \hline 3 \quad 4 \quad . \quad 9 \quad 3 \quad 5 \end{array}$$

(b) $512.007 - 275.72 = 236.287$

$$\begin{array}{r}
 \textcircled{10} \textcircled{11} \quad \textcircled{9} \\
 \textcircled{4} \textcircled{0} \textcircled{1} \quad \textcircled{10} \textcircled{10} \\
 512.007 \\
 - 275.720 \\
 \hline
 236.287
 \end{array}$$

8. The weight of potatoes

= Total weight - (weight of onions + weight of tomatoes)

= $12.552 \text{ kg} - (3.55 \text{ kg} + 4.75 \text{ kg})$

= $12.552 \text{ kg} - 8.30 \text{ kg} = 4.252 \text{ kg}$

$$\begin{array}{r}
 \textcircled{1} \quad \textcircled{1} \\
 3.55 \\
 4.75 \\
 + 8.30 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \textcircled{0} \textcircled{12} \\
 12.552 \\
 - 8.300 \\
 \hline
 4.252
 \end{array}$$

Maths Lab Activity

	Fraction	Decimal
20 parts blue	$\frac{20}{100}$	0.20
35 parts red	$\frac{35}{100}$	0.35
16 parts green	$\frac{16}{100}$	0.16
14 parts pink	$\frac{14}{100}$	0.14