2. Introduction to Decimals

Key Concepts

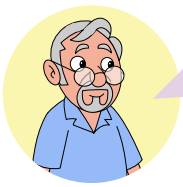
1. Decimals
2. Decimal place value chart
3. Types of decimal numbers
4. Comparing and ordering of decimal numbers
5. Operations on decimal numbers
6. Decimals in daily life

Why should I read this chapter?

We use decimals every day while dealing with money, weight, length etc. Decimal numbers are used to represent fractional part of a number.

Prep-up

Rohan went to a grocery shop with his grandfather to buy 3 kg 500 g of rice. The shopkeeper weighed the rice on a weighing machine.



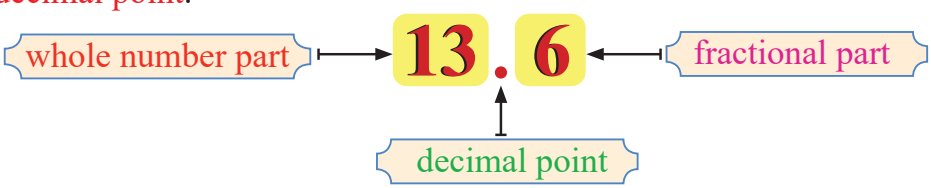
Rohan, can you tell me if the weight of the rice shown on the weighing machine is correct or not?

Grandpa, I am unable to understand. Why is that dot there in between the numbers?

1. Write down the weight of rice shown on the weighing machine.
2. Is the number shown a fraction?
3. Do you think the number is greater than 3?

Decimals

Decimal numbers are used where whole numbers cannot precisely measure a quantity. Decimal numbers consist of a whole number part and a fractional part, separated by a dot called the decimal point.



Here the number 13.6 is read as thirteen point six.

Let us learn more about what these numbers with a dot in between them are.

We know that fraction is part of a whole. For example, $\frac{4}{10}$ means 4 out of 10.

The fractions with denominators 10, 100, 1,000 and so on are called decimal fractions.

Decimal fractions can be written in a different form with a dot in between the digits.

For example, $\frac{4}{10}$ can be written as 0.4, that is zero point four.

When fractions are written in this form with a dot between the digits, they are called decimal numbers.

The word 'decimal' came from the Latin word *decem* meaning 'ten'.

Reading or writing a decimal number

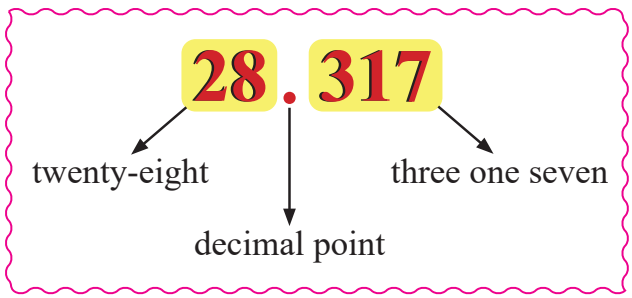
To read (or write) the name of a decimal number, follow the steps given below.

Step 1: First, read (or write) the name of the whole number part.

Step 2: Then, read (or write) 'point' for the decimal point.

Step 3: Next, read (or write) the names of each individual digit in the fractional part.

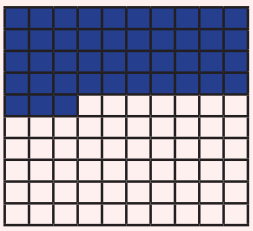
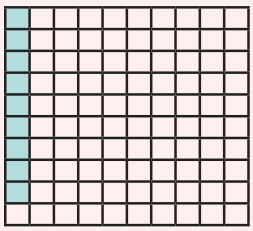
Let us take an example.



The above decimal number is read as 'twenty-eight point three one seven'.

Here, 28 is the whole number part and 317 is the fractional part of the decimal number.

Example 1: Write the following as decimal fractions.

(a.)  (b.)  (c.) 

Solution:

(a.) $\frac{6}{10}$ (b.) $\frac{43}{100}$ (c.) $\frac{9}{100}$

Example 2: Write the following decimal numbers in words.

(a.) 0.46 (b.) 1.08 (c.) 25.631 (d.) 100.7

Solution:

(a.) zero point four six
(b.) one point zero eight
(c.) twenty-five point six three one
(d.) one hundred point seven

Example 3: Write the following in figures.

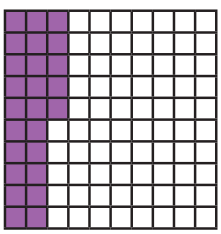
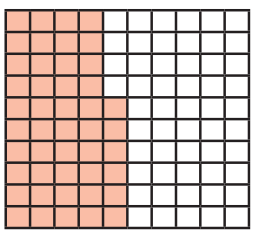
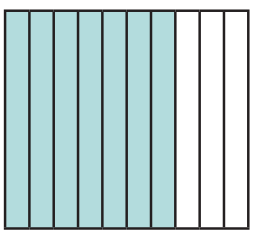
(a.) zero point nine nine
(b.) one point zero six eight
(c.) one hundred twenty-five point three one
(d.) seventy point three one seven

Solution:

(a.) 0.99 (b.) 1.068 (c.) 125.31 (d.) 70.317

Progress Meter 1

1. Write the following as decimal fractions.

(a.)  (b.)  (c.)  (d.) 

2. Write the following decimal numbers in words.

(a.) 3.51 (b.) 6.01 (c.) 19.200 (d.) 0.938 (e.) 4.28 (f.) 7.6

(g.) 31.5 (h.) 7.001 (i.) 88.923 (j.) 19.837 (k.) 177.20 (l.) 5.70

3. Write the following numbers in figures.

(a.) twenty-eight point nine one

(b.) one point three seven zero

(c.) five hundred point one

(d.) sixty-seven point four zero eight

(e.) zero point zero four six

(f.) eleven point two three two

(g.) one hundred thirty-one point seven

(h.) eighteen point one seven five

Decimal place value chart

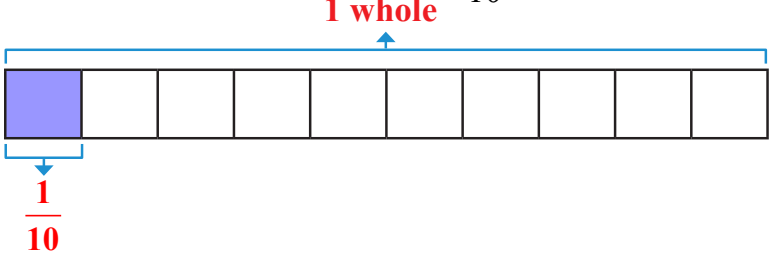
Decimal numbers can be represented using place value chart.

Digits of the whole number part of the decimal numbers have place values according to their places in the number.

To find the place values of the digits in the fractional part of the decimal numbers, we have to extend the place value chart after the ones place.

Tenths

When we divide one whole into ten parts, each part is $\frac{1}{10}$.

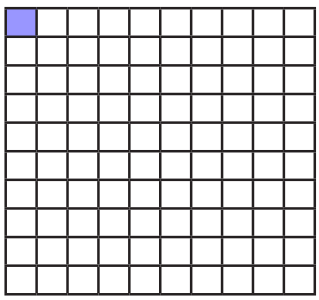


$\frac{1}{10}$ means 1 out of 10, that is 0.1 in the decimal form.

$\frac{1}{10}$ or 0.1 is called one tenth. Tenths is the first place value after ones to the right side of the decimal point.

Hundredths

Now, when we divide one whole into hundred parts, each part is $\frac{1}{100}$.

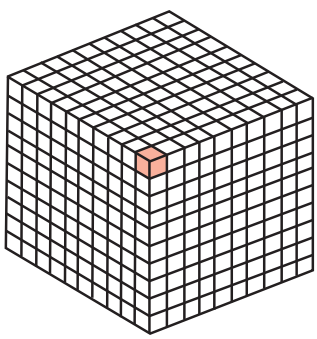


$\frac{1}{100}$ means 1 out of 100, that is 0.01 in the decimal form.

$\frac{1}{100}$ or 0.01 is called one hundredth. Hundredths is the place value after tenths to the right side of the decimal point.

Thousandths

Similarly, when we divide one whole into thousand parts, each part is $\frac{1}{1,000}$.



$\frac{1}{1,000}$ means 1 out of 1,000, that is 0.001 in the decimal form.

$\frac{1}{1,000}$ or 0.001 is called one thousandth. Thousandths is the place value after hundredths to the right side of the decimal point.

To represent decimal numbers, we can use the extended place value chart.

Ten Thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
10,000	1,000	100	10	1	.	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1,000}$
						0.1	0.01	0.001

Let us now write the number 31.842 in the expanded form using the extended place value chart.

	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
			3	1	.	8	4	2
place values			30	1		$\frac{8}{10}$ or 0.8	$\frac{4}{100}$ or 0.04	$\frac{2}{1,000}$ or 0.002

$$31.842 = 30 + 1 + \frac{8}{10} + \frac{4}{100} + \frac{2}{1,000}$$

$$= 30 + 1 + 0.8 + 0.04 + 0.002$$

Example 4: Write the place value of each digit in 439.716.

Solution:

	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
	4	3	9	.	7	1	6
place values	400	30	9		$\frac{7}{10}$ or 0.7	$\frac{1}{100}$ or 0.01	$\frac{6}{1,000}$ or 0.006

Example 5: Write the expanded form of 5.278.

Solution:

5.278 = 5 ones + 2 tenths + 7 hundredths + 8 thousandths

$$= 5 + \frac{2}{10} + \frac{7}{100} + \frac{8}{1,000}$$

$$= 5 + 0.2 + 0.07 + 0.008$$

Progress Meter 2

1. Write the place values of each digit of the decimal numbers using a place value chart.

(a.) 2.46 (b.) 3.86 (c.) 1.4 (d.) 2.04 (e.) 2.59 (f.) 37.749

(g.) 5.871 (h.) 7.98 (i.) 3.5 (j.) 0.07 (k.) 4.76 (l.) 13.703

2. Match the following decimal numbers with their expanded forms.

(a.)	6.87	i.	$60 + 7 + \frac{8}{10}$
(b.)	6.78	ii.	$60 + 7 + \frac{8}{100}$
(c.)	67.8	iii.	$6 + \frac{8}{10} + \frac{7}{100}$
(d.)	67.08	iv.	$6 + \frac{7}{10} + \frac{8}{100}$
(e.)	7.65	v.	$70 + 6 + \frac{5}{10}$
(f.)	70.658	vi.	$70 + 6 + \frac{5}{100}$
(g.)	76.5	vii.	$7 + \frac{6}{10} + \frac{5}{100}$
(h.)	76.05	viii.	$70 + \frac{6}{10} + \frac{5}{100} + \frac{8}{1,000}$

Types of decimal numbers

Like and unlike decimals

Read the following decimal numbers and answer the questions below.

53.1 **28.3** **113.18** **41.123**

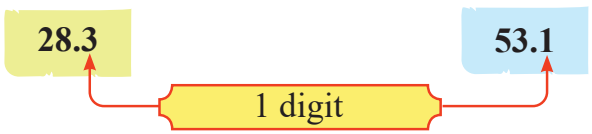
Do all the numbers have the same number of digits after the decimal point?

Which decimal number has the same number of digits after the decimal point as 28.3?

Which decimal number has the greatest number of digits after the decimal point?

When two decimal numbers have an equal number of digits to the right of the decimal point, they are called like decimals.

For example, 28.3 and 53.1 are like decimals.



When two decimal numbers have different numbers of digits to the right of the decimal point, they are called unlike decimals.

For example, 113.18 and 41.123 are unlike decimals.

The whole number parts of the decimal numbers are not considered to decide if the numbers are like or unlike decimals.

Equivalent decimals

Consider the numbers 0.6, 0.60 and 0.600.

Are these unlike decimals?

The above decimals can be written in fraction form as follows.

$0.6 = \frac{6}{10}, 0.60 = \frac{60}{100}, 0.600 = \frac{600}{1,000}$

We can see that $\frac{6}{10}, \frac{60}{100}$ and $\frac{600}{1,000}$ are equivalent fractions. Hence, their corresponding decimal numbers 0.6, 0.60 and 0.600 are also of equal value.

The decimal numbers which have the same value are called equivalent decimals.
Hence, 0.6, 0.60 and 0.600 are all equivalent decimals.

Converting unlike decimals into like decimals

When converting unlike decimals to like decimals, follow the steps given.

Step 1: First, count the number of digits in the fractional part of each number, that is, the number of digits to the right of the decimal point.

Step 2: Identify the number that has the highest number of digits in the fractional part.

Step 3: Write zeros after the last digit of the other numbers such that all the numbers have the same number of digits to the right of the decimal point.

Example 6: Convert the following unlike decimals into like decimals.

4.2, 56.7, 78.17 and 9.126

Solution:

Among the given numbers, 9.126 has the greatest number of digits to the right of the decimal point.

Therefore, rewriting the other decimal numbers we get,

4.2 → 4.200 56.7 → 56.700 78.17 → 78.170

The numbers 4.200, 56.700, 78.170 and 9.126 are like decimals.

The value of a decimal number does not change by writing any number of zeros after the last digit in the fractional part.

Progress Meter 3

1. Convert the following into like decimals.

(a.) 1.4, 1.45, 3.23, 2.5	(b.) 9, 2.4, 6.98, 8.327	(c.) 3.8, 2.45, 8, 6.56
(d.) 7.87, 8.9, 2.5, 7.6	(e.) 8.46, 1.87, 2.5, 1.09	(f.) 2.81, 9.1, 6.5, 3.650
(g.) 2.4, 1.9, 4, 2.410	(h.) 4.51, 1.2, 4, 1.98	(i.) 1.2, 4.5, 1.07, 5.27
(j.) 4.87, 6.1, 3.65, 5.1	(k.) 7.38, 4.65, 1.23, 1.3	(l.) 3.17, 8.9, 5.2, 1.90

Comparing and ordering of decimal numbers

Comparing decimal numbers

Rohan and Soniya have a card each with a decimal number written on it. They want to compare the decimal numbers.

28.591

I have 28.591. It is greater as it has more digits after the decimal point.

31.1

I have 31.1. It is greater as it has a greater whole part.

Who has a greater number according to you? ☐

To compare two decimal numbers, follow the given steps.

Step 1: First, compare the whole number parts of the decimal numbers. The number with a greater whole number part is greater.

Step 2: If the whole number parts are equal, then compare the fractional parts.

For comparing the fractional parts, we compare the digits starting with the greatest place values, that is, first the tenths, then the hundredths and so on. The number with the first greater place value will be greater.

Example 7: Compare 3.41 and 5.2.
Solution:
The numbers 3.41 and 5.2 have different whole number parts.
Comparing the whole number parts we get, $3 < 5$.

Hence, $3.41 < 5.2$.

Example 8: Compare 8.05 and 8.7.
Solution:
Here, the numbers have the same whole number parts. Hence, we compare the digits in the tenths place. Comparing the digits in the tenths place, we get $0 < 5$.

Hence, $8.05 < 8.7$.

Ordering decimal numbers

Just like ordinary numbers, we can order decimal numbers as well.

For ordering decimal numbers, we first convert them into like decimals and then order them.

Example 9: Arrange the numbers in ascending order.
2.98, 3.1, 29.16, 27
Solution:
Converting the decimal numbers into like decimals, we get,
2.98, 3.10, 29.16, 27.00
$2.98 < 3.10 < 27.00 < 29.16$
Hence, $2.98 < 3.1 < 27 < 29.16$.

Example 10: Arrange the numbers in descending order.
12.34, 1.23, 13.278, 34.1
Solution:
Converting the decimal numbers into like decimals, we get,
12.340, 1.230, 13.278, 34.100
$34.100 > 13.278 > 12.340 > 1.230$
Hence, $34.1 > 13.278 > 12.34 > 1.23$.

Progress Meter 4

1. Compare using >, < or =.

(a.)	3.55 ☐ 43.52	(b.)	18.49 ☐ 19.9	(c.)	21.75 ☐ 21.75
(d.)	5.17 ☐ 51.7	(e.)	4.63 ☐ 4.63	(f.)	7.67 ☐ 6.76
(g.)	10.35 ☐ 10.53	(h.)	47.31 ☐ 4.73	(i.)	25.60 ☐ 25.7
(j.)	24.5 ☐ 24.5	(k.)	7.700 ☐ 6.77	(l.)	5.26 ☐ 5.162

2. Arrange the following in ascending order.

(a.) 23.87, 230.87, 23.08, 25.85, 2.35

(b.) 33.6, 12.9, 30.8, 25.9, 23.09

(c.) 8.98, 89.8, 8.09, 7.80, 3.98

(d.) 5.98, 56.7, 45.09, 3.7, 5.45

(e.) 2.38, 4.87, 0.37, 37, 3.981

(f.) 2.89, 3.1, 9.01, 2.982, 3.03

3. Arrange the following in descending order.

(a.) 8.8, 4.76, 2.34, 3.82, 1.238

(b.) 2.74, 2.08, 12.76, 2.67, 9.56

(c.) 7.34, 9.0, 2.08, 1.36, 7.8

(d.) 2.90, 3.70, 29, 36.7, 19.63

(e.) 2.34, 37, 8.37, 0.37, 8.98

(f.) 4.081, 5.20, 4.43, 3.980, 1.679

Operations on decimal numbers

To add or subtract decimal numbers, follow the given steps.

Step 1: If the numbers given are unlike decimals, first convert them into like decimals.

Step 2: Arrange them in columns in such a way that the decimal points are in the same column.

Step 3: Add or subtract the numbers ignoring the decimal point.

Step 4: Drag down the decimal point in the same place as the above numbers.

Example 11: Add 11.5 and 2.2.

Solution:

Both the numbers are like decimals. We arrange them in columns and add.

11.5 + 2.2 = 13.7

	Tens	Ones		Tenths
	1	1	.	5
+		2	.	2
	1	3	.	7

Example 12: Add 28.31 and 11.6.

Solution:

Here, the numbers are unlike decimals. Converting them into like decimals, we get, 28.31 and 11.60.

Then, we arrange them in columns and add.

28.31 + 11.6 = 39.91

	Tens	Ones		Tenths	Hundredths
	2	8	.	3	1
+	1	1	.	6	0
	3	9	.	9	1

Example 13: Subtract 3.51 from 13.98.

Solution:

Both the numbers are like decimals. We arrange them in columns and subtract.

13.98 – 3.51 = 10.47

	Tens	Ones		Tenths	Hundredths
	1	3	.	9	8
–		3	.	5	1
	1	0	.	4	7

Example 14: Subtract 8.3 from 29.67.

Solution:

Here, the numbers are unlike decimals. Converting them into like decimals, we get, 8.30 and 29.67.

Then, we arrange them in columns and subtract.

29.67 – 8.3 = 21.37

	Tens	Ones		Tenths	Hundredths
	2	9	.	6	7
–		8	.	3	0
	2	1	.	3	7

Progress Meter 5

1. Add the following.

(a.) 5.4 + 3.5	(b.) 4.2 + 2.3	(c.) 2.43 + 6.4
(d.) 12.4 + 6.5	(e.) 2 + 1.07	(f.) 90.2 + 3.76
(g.) 8.4 + 1.2	(h.) 6.2 + 1.2	(i.) 4.29 + 1.5
(j.) 24.3 + 1.3	(k.) 4 + 2.30	(l.) 70.1 + 2.31

2. Subtract the following.

(a.) 6.65 – 5.25	(b.) 56.4 – 1.3	(c.) 29.57 – 12.4
(d.) 55.2 – 3.1	(e.) 9.5 – 5.5	(f.) 1.34 – 1.34
(g.) 3.55 – 1.25	(h.) 43.7 – 2.4	(i.) 34.9 – 23.5
(j.) 48.7 – 6.5	(k.) 2.4 – 1.0	(l.) 7.77 – 1.01

Decimals in daily life

Rohan and his friends went to buy some items.

I bought 2 m 50 cm of ribbon for a craft project.

I bought a water bottle. It can hold 1 *l* 750 ml of water.

I bought a bag that can carry 3 kg 250 g of weight.

We can also write measurement of quantities using a decimal point.

Observe the following units of measurement we use in our day-to-day lives.

1 cm = 10 mm 1 mm = $\frac{1}{10}$ cm = 0.1 cm	1 g = 1,000 mg 1 mg = $\frac{1}{1,000}$ g = 0.001 g
1 m = 100 cm 1 cm = $\frac{1}{100}$ m = 0.01 m	1 kg = 1,000 g 1 g = $\frac{1}{1,000}$ kg = 0.001 kg
1 km = 1,000 m 1 m = $\frac{1}{1,000}$ km = 0.001 km	1 *l* = 1,000 ml 1 ml = $\frac{1}{1,000}$ *l* = 0.001 *l*

When quantities are written with a decimal point, the number to the left of the decimal point represents quantity with the greater unit and the number to the right of the decimal point represents quantity with the smaller unit.

Quantities written with a decimal point carry unit of the greater quantity.

At the beginning of the section, we saw that Rohan and his friends bought some items. We can write them as follows.

Rohan bought 2.50 m of ribbon. Soniya bought a water bottle which holds 1.750 *l* of water. Priya bought a bag which can carry 3.250 kg of weight.

Example 15: Write 6 km 122 m using decimal point.

Solution:

6 km 122 m = 6.122 km

Example 16: Write 25 g 305 mg using decimal point.

Solution:

25 g 305 mg = 25.305 g

Example 17: Write 10 *l* 20 ml using decimal point.

Solution:

10 *l* 20 ml = 10.020 *l*

Word problems on operations of decimal numbers

Example 18: Ram mixed 1.80 *l* of fruit syrup with 1.15 *l* of water to make a juice. Find the amount of juice made by him.

Solution:

Amount of fruit syrup = 1.80 *l*

Amount of water = 1.15 *l*

Total amount of juice = (1.80 + 1.15) *l* = 2.95 *l*

	Ones		Tenths	Hundredths	
	1	.	8	0	*l*
+	1	.	1	5	*l*
	2	.	9	5	*l*

Ram made 2.95 *l* of juice.

Example 19: Riya has to travel 17.5 km to reach her native place. She has already travelled 6.2 km. How much more does she need to travel?

Solution:

Total distance Riya needs to travel = 17.5 km

Distance she travelled = 6.2 km

Distance needs to be travelled more = (17.5 − 6.2) km

= 11.3 km

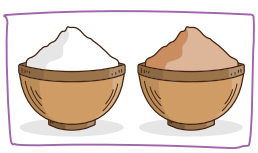
Tens	Ones		Tenths	
1	7	.	5	km
−	6	.	2	km
1	1	.	3	km

Riya has to travel 11.3 km more.

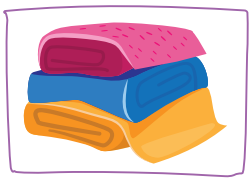
Progress Meter 6

1. Solve the following.

(a.) Mira used 210.25 g of white sugar and 75.50 g of brown sugar to make chocolates. Find the total amount of sugar used.

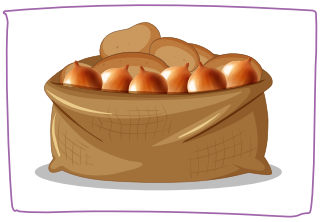


(b.) Gita made 2.5 *l* of rose syrup. Next day, she made 1.4 *l* of rose syrup. How much syrup did she make in the two days?



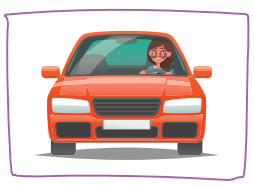
c. Jay had 4.55 m of cloth. He used 2.25 m of cloth from it to stitch a shirt. How much cloth is left with him?

d. Rohit bought 3.2 kg of potatoes and 1.25 kg of onions. He has a bag that can carry only 4.5 kg of weight. Will Rohit be able to carry both the potatoes and the onions in the bag? Why or why not?



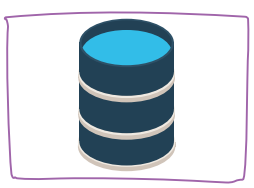
e. A wooden log, which weighs 4.36 kg, is split into two pieces. If one of the pieces weighs 2.13 kg, how much does the other piece weigh?

f. Jaya bought 1.2 kg of corn cobs, 3.2 kg of tomatoes and 1.35 kg of eggplants. Find the total weight of vegetables she bought.



g. Richa drove 5.3 km from her office to the market. Then, she drove 10.2 km from the market to her home. How much did she drive in total?

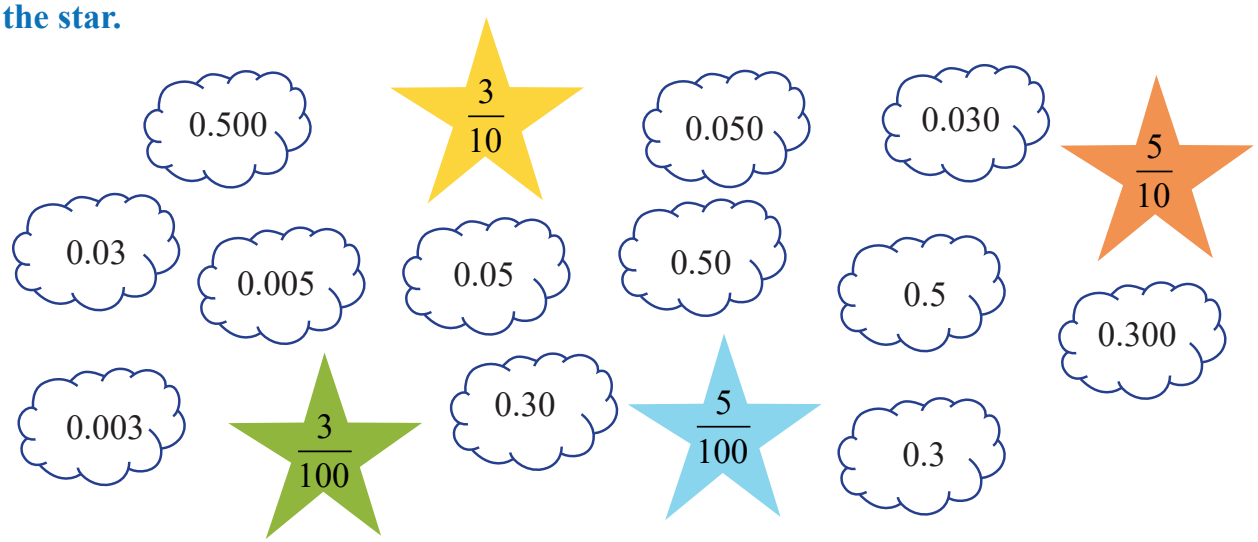
h. Two books weigh 1.13 kg and 1.8 kg respectively. What is the total weight of the books?



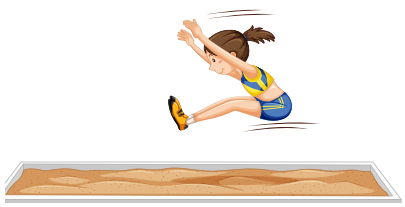
i. A water tank has 25.750 *l* of water. Jiya used 14.250 *l* of water from it. How much water is left in the tank?

Mental Maths

See the fractions in the stars and identify the decimal numbers that represent them. Colour the decimal numbers and their equivalent decimals with the same colour as the star.



Maths Connect



Long jump is a sport in which the athletes try to leap forward as far as possible. The event is known to be a part of the ancient Olympics and has been a part of the modern Olympics since 1896.

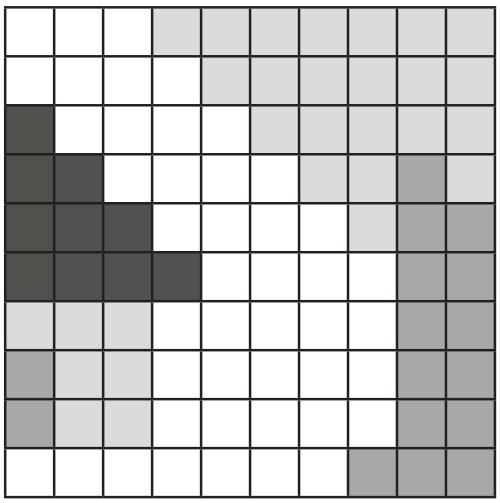
The current world record for women is 7.52 m by Galina Chistyakova, who achieved it in Leningrad in 1988. For men, it is 8.95 m, achieved by Mike Powell in Tokyo in 1991.

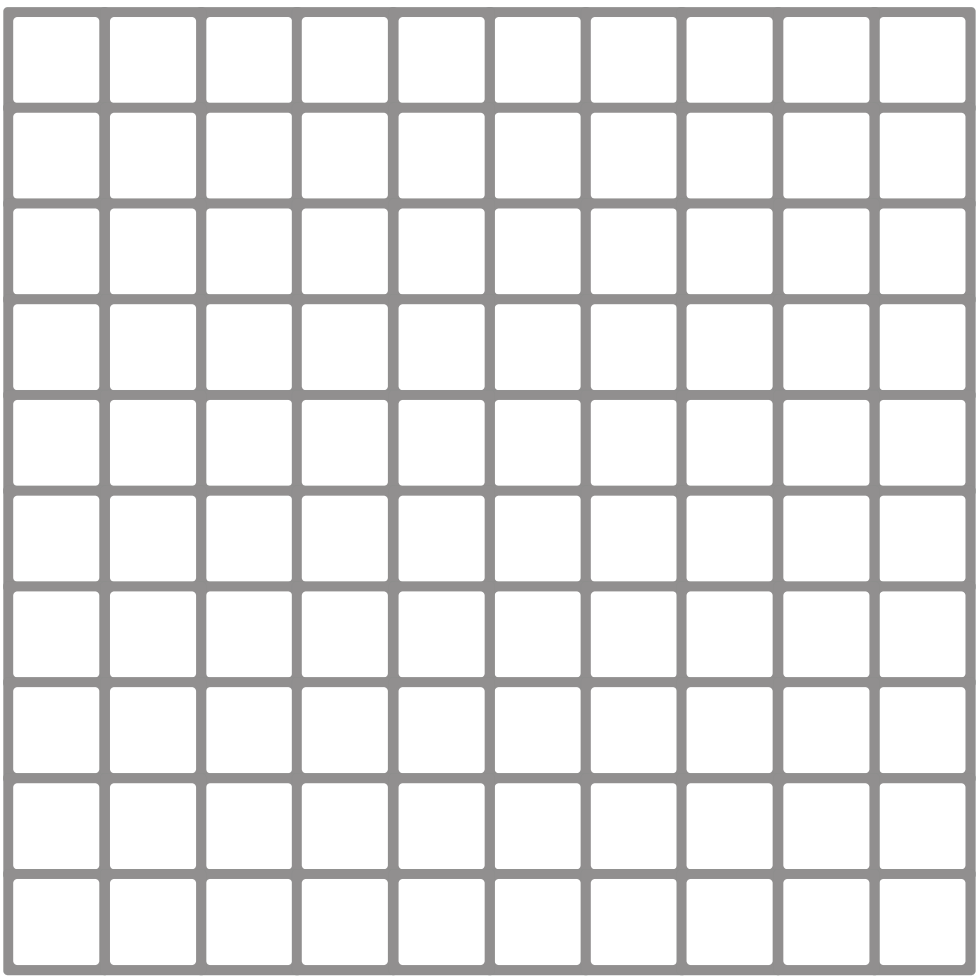
1. Write 7.52 and 8.95 in words.
2. Write 7.52 in the extended place value chart.
3. Write 8.95 in expanded form.
4. What is the difference between 7.52 m and 8.95 m?

Fun Time

Use the image as a guide and fill in the colours in the empty grid using the decimal values provided.

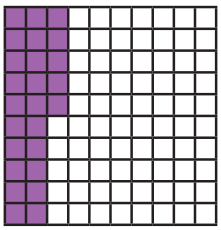
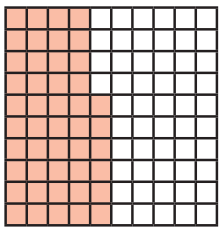
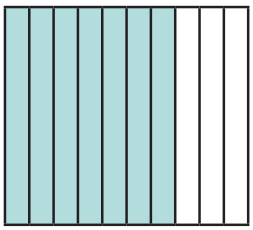
green	0.22
brown	0.14
red	0.10
yellow	0.07
blue	0.02





Exercise

1. Write the following as decimal fractions.

(a.)  (b.)  (c.)  (d.) 

2. Write the place value of 5 in the following decimal numbers.

(a.) 5.87 (b.) 4.415 (c.) 67.05 (d.) 500.67 (e.) 12.5

3. Write the following in expanded form.

(a.) 56.45 (b.) 28.67 (c.) 2.09 (d.) 1.785 (e.) 98.364

4. Compare the following using <, > or =.

(a.) 3.4 ☐ 2.9 (b.) 23.45 ☐ 23.54 (c.) 31.83 ☐ 31.83

(d.) 12.09 ☐ 1.29 (e.) 9.3 ☐ 12.4 (f.) 61.33 ☐ 61.54

5. Arrange the following in ascending order.

(a.) 2.78, 1.65, 18.78, 1.90, 8.97 (b.) 1.76, 2.08, 0.56, 7.28, 8.67

(c.) 4.981, 1.67, 2.7, 0.38, 6.34 (d.) 7.09, 1.00, 1.65, 7.45, 6.7

6. Arrange the following in descending order.

(a.) 6.8, 18.56, 1.80, 18.5, 12,8 (b.) 8.56, 2.84, 9.35, 93.5, 1.98

(c.) 4.78, 1.25, 9.70, 2.67, 1.870 (d.) 1.37, 3.87, 2.36, 3.03, 2.87

7. Add the following numbers.

(a.) 45.34 + 2.3 (b.) 12.2 + 1.55 (c.) 1.2 + 45.23

(d.) 24.67 + 5.01 (e.) 64.21 + 35.67 (f.) 70.25 + 13.11

8. Subtract the following numbers.

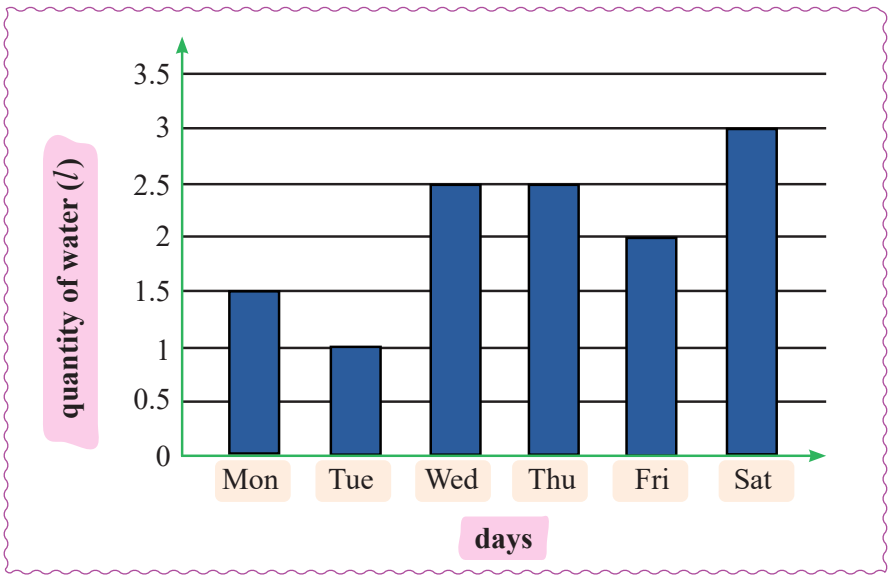
(a.) 12.7 – 2.0 (b.) 67.23 – 3.2 (c.) 87.98 – 4.6

(d.) 9.753 – 3.41 (e.) 7.254 – 6.143 (f.) 55.99 – 21.72

9. **Tanmay, Rishi and Vikas walked a distance of 12.5 km, 10.2 km and 12.05 km, respectively. Find the total distance they walked.**

10. **What is to be added to 3.45 to get 5.45?**

11. **The bar graph shows the quantity of water drank by Amit from Monday to Saturday. Observe the bar graph and answer the following questions.**



(a.) On which day did Amit drink the most amount of water?

(b.) How much water did he drink on Tuesday and Wednesday altogether?

(c.) How much more water did he drink on Thursday than on Friday?

(d.) On which day did he drink the least quantity of water?

(e.) How much water did he drink altogether on Monday and Saturday?

12. **State true or false.**

(a.) Tom bought 10 chocolates and ate 3 of them. The number of chocolates he ate is represented as 0.03. ☐

(b.) The decimal 0.6 is the same as 0.60. ☐

(c.) The decimal 0.44 is less than 0.046. ☐

(d.) The decimal 0.45 is more than 0.450. ☐

(e.) The decimal 0.812 is equal to 0.082. ☐

13. Choose the correct options.

(a.) Which among the following is incorrect?

i. $0.67 > 0.068$ ii. $1.67 < 1.609$ iii. $0.03 = 0.030$ iv. $8.06 < 8.60$

(b.) Which digit comes in the tenths place of $67.45 + 2.03$?

i. 6 ii. 9 iii. 4 iv. 8

(c.) Find the missing number.

$2.67 - \_\_\_\_\_ = 2.56$

i. 11 ii. 1.1 iii. 0.11 iv. 1.01

(d.) $70 + \frac{1}{10} + \frac{3}{100} = \_\_\_\_\_$

i. 70.13 ii. 7.13 iii. 71.3 iv. 70.3

(e.) Nine-tenths is the same as _____.

i. 9.0 ii. 9.10 iii. 0.9 iv. 0.09

(f.) Which number lies between 1.26 and 1.28?

i. 1.25 ii. 1.29 iii. 1.27 iv. 1.82

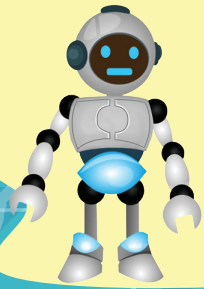
(g.) Which among the following is true?

i. $\frac{1}{10} < 0.1$ ii. $\frac{2}{100} > 0.2$ iii. $\frac{45}{100} = 0.45$ iv. $5.5 > \frac{67}{10}$

(h.) What should be subtracted from the sum of 1.3 and 2.4 to get 1.1?

i. 1.4 ii. 1.1 iii. 2.4 iv. 2.6

Think Class



Rohan's robot wants to check Rohan's understanding of the concepts of decimal numbers he has learnt so far. It asked him the following questions. Help Rohan solve them.

1. Colour the boxes to make a path in such a way that the sum of the numbers is equal to the number given in red.

(a.)

1.2	4.0	3.2
5.4	2.3	2.4
		9.9

(b.)

4.3	5.4	6.0
1.1	2.2	0.3
		7.9

2. The smallest and greatest possible decimal numbers are formed using 0, 2, 3 and 4 with two digits after the decimal point, keeping 0 always at the tenths place. Tick(✓) the correct pair of greatest and smallest decimal numbers thus formed.

- greatest: 43.02, smallest: 20.43 ☐
- greatest: 43.02, smallest: 23.04 ☐
- greatest: 40.32, smallest: 20.34 ☐
- greatest: 42.03, smallest: 34.02 ☐

3. Observe the following images. Do both the images represent the same value? Why or why not?