1 Decimal numbers: representation

Pablo buys a book for €12,75.

Integer				decimal		
M	T	U	,	t	h	th
	1	2	,	7	5	

1 Ten
2 Units
7 tenths
5 hundredths
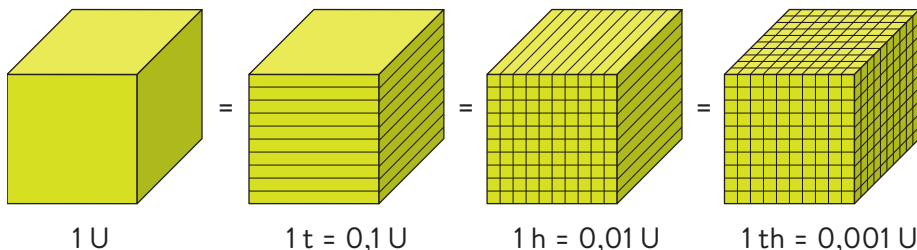
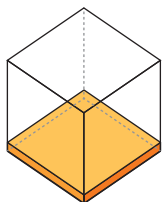1 U   1 t = 0,1 U   1 h = 0,01 U   1 th = 0,001 U

A **decimal number** has an integer part and a decimal part, separated by a comma.

- The **integer part** is everything to the left of the comma: units, tens, hundreds, and so on.
- The **decimal part** is everything to the right of the comma: tenths, hundredths, thousandths, and so on.
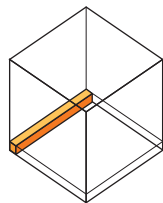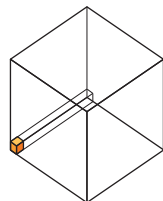

With a decimal number, we read the integer and then the decimal part, from largest to smallest – although this is not the only way to do it.

H	T	U	,	t	h	th	
							12 units and 75 hundredths
							12 units and 750 thousandths
1	2	,	7	5			12 units, 7 tenths, 5 hundredths
							12 comma 75

Representing decimal numbers

To represent the number 4,238 on a number line, follow these steps.

1. Find the integer on the number line, and the next integer.

2. Divide the space into 10 equal parts, or tenths.

3. Divide each tenth into ten equal parts, or hundredths.

4. By doing this repeatedly, we get successively smaller decimal units.

Take note

1 UNIT

1 TENTH = 0,1 UNIT

1 HUNDREDTH = 0,01 UNIT

1 THOUSANDTH = 0,001 UNIT

Activities

1 Copy and complete the table in your notebook.

Number	Integer part	Decimal part	Read as
43,002			
0,3679			
321,99			
9 152,4			

Take note

A ten-thousandth is the place value after a thousandth.

2 Write these using numbers
  a) twelve units and three tenths
  b) fifty and three hundredths
  c) ten units and three thousandths
  d) two hundred and three ten thousandths

3 What value does 8 have in these numbers?
  a) 803,50
  b) 58,106
  c) 2,08
  d) 15,807

4 Copy and complete.
  a) 3 tenths = ▓ thousandths
  b) 0,23 units = ▓ tenths
  c) 7,9 hundredths = ▓ thousandths
  d) 325 thousandths = ▓ hundredths

5 Write a number that fits each description.
  a) a number with 900 units
  b) a number with 9 in the thousandths column
  c) The number has 3 units and 25 thousandths.
  d) The number of tens is greater than the number of tenths.

6 Write a number with 23 units, 43 tenths and 37 hundredths.

Remember

$$51,104 = 50 + 1 + 0,1 + 0,004$$

7 Using the Remember box above, write these numbers as a sum of their component parts.
  a) 47,91
  b) 6,007
  c) 12,9732
  d) 0,0001

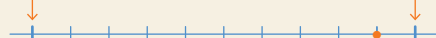**8** Copy this number line and mark the decimal numbers below on it.

  a) 3,3
  b) 3,9
  c) 3,6
  d) 3,5

9 Mark these decimal numbers on separate number lines.
  a) 6,23
  b) 7,3
  c) 0,705
  d) 2,31

10 Which decimal numbers are marked on these number lines?

  a)

  b)

CLIL zone

11 🔊 Look at these decimal numbers. Then listen and write *true* or *false*.
  a) 48,952   b) 79,0035   c) 32,59   d) 12,005   e) 0,9745   f) 984,35