

UNIT 6_DECIMAL NUMBERS_STUDENTS



[Listen to your teacher reading A TEXT about decimal numbers and fill the gaps.](#)

The _____ part or integral part of a _____ number is the part to the _____ of the decimal separatory . The _____ part or fractional part is the part to the _____ of the decimal separatory.

In _____:

1 are _____ 7 are _____
2 are _____ 5 are _____

A _____ number is composed by:

- _____ PART: on the _____ of the decimal point.
- _____ OR FRACTIONAL PART: on the _____ of the decimal point.



[LET'S WATCH AND LISTEN CAREFULLY AND FILL THE GAPS \(0- 2.48\)](#)

<http://www.youtube.com/watch?v=DiBwg5cNP84&list=PL7F6C8576EBEDD88F&index=18>

Any _____ can be converted to a _____ by simply dividing the _____ by the _____. We can do this using long _____ or with a _____. The result of this _____ will be a decimal number which is _____ to the _____.



[LET'S WATCH AND LISTEN CAREFULLY AND FILL THE GAPS \(3.13- 3.27\)](#)

<http://www.youtube.com/watch?v=DiBwg5cNP84&list=PL7F6C8576EBEDD88F&index=18>

A terminating _____ has a finite number of digits _____ the decimal point. A _____ decimal number has a sequence of _____ after the decimal point which repeats _____. Repeating decimals can be written with _____ dots, called an ellipsis, to indicate that the pattern _____ forever, or a bar _____ be placed over the _____ which repeat. For instance, we _____ indicate a repeating 3 by placing a bar over the 3. Likewise, a bar _____ a sequence of digits indicates that the sequence repeats _____.



[LET'S WATCH AND LISTEN CAREFULLY AND FILL THE GAPS \(6.15- end\)](#)

<http://www.youtube.com/watch?v=DiBwg5cNP84&list=PL7F6C8576EBEDD88F&index=18>

No matter how _____ we zoom in, the fraction _____ will _____ fall exactly on a division. We will just keep adding _____ after the _____ point forever. So although some _____ numbers like _____ can be represented by a finite number of digits others like _____ cannot.

2 READING AND WRITING DECIMAL NUMBERS

How decimal numbers are read

O t h

0. 3 8

▶ 0.38
 → Zero point three eight
 → Thirty eight hundredths

T O t h th

1 8. 0 2 5

▶ 18.025
 → Eighteen point zero two five
 → Eighteen ones and twenty-five thousandths

1. Write how these numbers are read:

	T	O	t	h	th
		0.	4	2	
		0.	0	1	6
		5.	3		
		1.	0	5	
1		2.	4	0	8
		7.	8	0	5
2		0.	1	1	

▶ _____

▶ _____

▶ _____

▶ _____

▶ _____

▶ _____

▶ _____

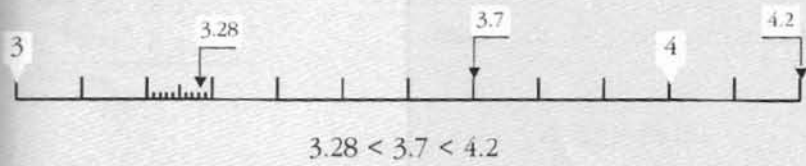
2. Fill in the table with the appropriate digits.

- Twenty-five hundredths ▶
- Forty-two thousandths ▶
- Three ones and nine hundredths ▶
- Twenty ones and five hundreds and thirteen thousandths ▶
- Two ones and ninety-three thousandths ▶
- Ten ones and three thousandths ▶
- One hundred and four thousandths ▶
- Eleven ones and one thousandth ▶

T	O	t	h	th
	0.	2	5	

Representing decimal numbers

Decimal numbers are represented in order on the number line.



4. Write the value that corresponds to each letter.



A = 5.4 B = C = D = E =

5. Put each number in the appropriate place on the number line.

M = 2.59 N = 2.63 P = 2.68 Q = 2.72



6. Express the amount of money each person has in euros.



Now, put these amounts in order from least to greatest.

< < < <

7. Fill in each box with an amount containing a decimal number.

$1 < \square < 2$

$3.5 < \square < 3.7$

$4 < \square < 4.5$

$6.8 < \square < 7$

Use the numbers, calculate and write down your answers.

$$\begin{array}{r} 6.4 \\ 0.82 \\ + 1.035 \\ \hline \end{array}$$

$4 + 0.82 + 1.035 =$

$48.5 - 6.87 =$

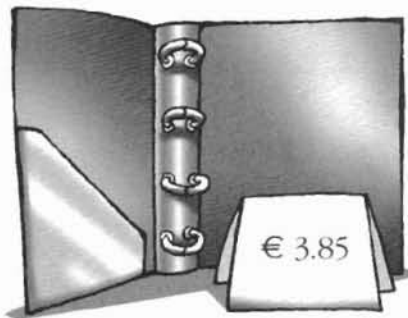
$3 - 0.275 =$

$5.24 + 0.058 + 1.702 =$

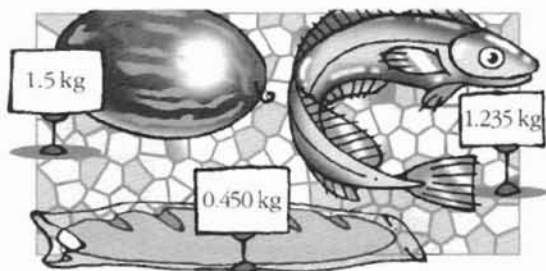
$18.24 + 5.7 + 3.528 =$

$12 - 2.635 =$

Marta had five euros and bought a notebook that cost three euros and eighty-five cents. How much money does she have left?



Rubén buys a melon that weighs one and a half kilos at the market. He also buys a loaf of bread that weighs four hundred and fifty grams and a fish that weighs 1.235 kg. What is the total weight of his purchases?



Multiplying a decimal number by a multiple of ten

When you multiply a decimal number by 10, 100, 1,000, etc., the comma is moved to the right one, two, three or more places, i.e. the same number of places as there are zeroes.

EXAMPLES

$$3.52 \times 10 = 35.2$$

$$4.208 \times 100 = 420.8$$

$$5.23 \times 1,000 = 5,230$$

3. Work out the answers in your head.

$3.28 \times 10 =$

$5.6 \times 100 =$

$0.3 \times 10,000 =$

$0.4 \times 10 =$

$1.25 \times 100 =$

$1.36 \times 1,000 =$

$0.02 \times 10 =$

$0.237 \times 100 =$

$0.053 \times 1,000 =$

4. Calculate and think about your answers.

$4 \times 0.5 =$

$6 \times 0.5 =$

$8 \times 0.5 =$

$10 \times 0.5 =$

$12 \times 0.5 =$

$14 \times 0.5 =$

What do you notice?

5. How much do 4 cinema tickets cost if each ticket costs € 3.35?

6. Marcela bought two and a half metres of fabric to make a dress. How much did she spend?



2. Calculate each quotient to two decimal points and say what the remainder is.

• $9 : 7$

$$\begin{array}{r} 9.00 \quad | \quad 7 \\ 20 \quad 1.28 \\ \underline{60} \\ 4 \end{array}$$

Remainder: 4 hundredths.

• $35 : 6$

$$\begin{array}{r} 35.00 \quad | \quad 6 \\ 5 \quad 5. \\ \underline{5} \end{array}$$

Remainder: hundredths.

• $82 : 3$

$$82 \quad | \quad 3$$

Remainder:

• $167 : 8$

Remainder:

• $248 : 9$

Remainder:

• $29 : 13$

Remainder:

• $276 : 22$

Remainder:

• $439 : 52$

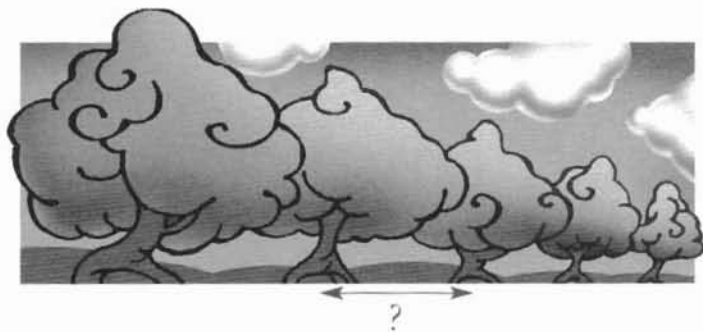
Remainder:

• $9 : 14$

$$\begin{array}{r} 9.00 \quad | \quad 14 \\ 0. \\ \underline{0} \end{array}$$

Remainder:

3. Five evenly-spaced trees are located on a stretch of land that covers 138 metres and runs parallel to a trail. How far away is the next tree?



4. Amelia paid three euros for four bags of sunflower seeds. How much did each bag cost?

Dividing a decimal number by a multiple of ten

When you divide a decimal number by 10, 100, 1,000, etc., the comma is moved to the left one, two, three or more places, i.e. the same number of places as there are zeroes after the one.

EXAMPLES

$$38.4 : 10 = 3.84$$

$$26 : 100 = 0.26$$

$$2.7 : 1,000 = 0.0027$$

3. Work out the answers in your head.

$$16.7 : 10 =$$

$$214.8 : 100 =$$

$$2.3 : 1,000 =$$

$$5.2 : 10 =$$

$$15 : 100 =$$

$$4 : 1,000 =$$

$$25 : 10 =$$

$$8.7 : 100 =$$

$$500 : 1,000 =$$

4. Three friends contribute the same amount of money to buy a birthday present that costs € 17.40. How much money does each friend give?

5. How much does each dictionary weigh?



6. Carlos went around the circuit four times, covering a total distance of 11.2 km. How long is the circuit?

7. We paid € 17.50 for a 10-kilo crate of peaches. How much does one kilo cost?

2. Calculate each quotient to one decimal place.

$8.4 : 3.2 \rightarrow 8,4 : 3,2$

$$\begin{array}{r} 84.0 \quad | \quad 3.2 \\ 200 \quad 2.6 \\ \hline 08 \end{array}$$

$1.62 : 0.3 \rightarrow \underline{\hspace{2cm}}$

$4.2 : 0.06 \rightarrow \underline{\hspace{2cm}}$

$0.24 : 0.08 \rightarrow \underline{\hspace{2cm}}$

$3 : 0.52 \rightarrow \underline{\hspace{2cm}}$

$4.86 : 24.3 \rightarrow \underline{\hspace{2cm}}$

$0.336 : 0.835 \rightarrow \underline{\hspace{2cm}}$

$2.678 : 1.11 \rightarrow \underline{\hspace{2cm}}$

$3.96 : 2.475 \rightarrow \underline{\hspace{2cm}}$

3. Francisco goes forward 0.8 metres with each step he takes. How many steps does he take if he covers a distance of 40 metres?



4. € 3.25 euros buys one melon that weighs two and a half kilos. How much does one kilo cost?