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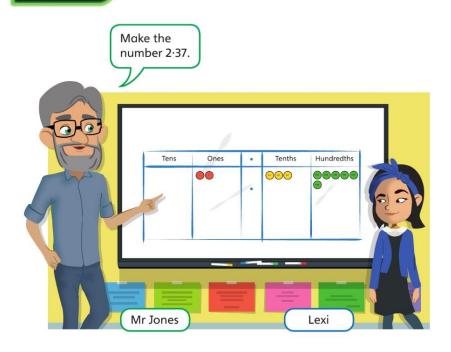
The first page of a lesson is a maths problem. Don't look at the next page until you have had a go! The third and fourth pages give you practice, so you can check your understanding.



2

# Writing decimals

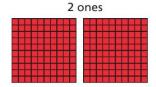
# Discover

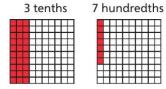


- a) What mistake has Lexi made?
  - b) Show I3.5 on a place value grid.

#### Share

a) The number 2.37 is made up of:







I know what each digit in a decimal means! The first digit after the decimal point tells me how many tenths. The second digit tells me how many hundredths.

Т	0	•	Tth	Hth
	•••	•	01 01 01	0 00 00 00 00 00
	2	•	3	

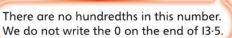
$$2.37 = 2 + 0.3 + 0.07$$

Lexi's answer shows 2 ones and 3 tenths so this is correct.

Lexi's hundredths column only has 6 hundredths. 2:37 has 7 hundredths, so this is Lexi's mistake.

**b)** 13.5 has I ten, 3 ones and 5 tenths, so 13.5 = 10 + 3 + 0.5.

Т	0	•	Tth	Hth
0	000	•	01 01 01 01	



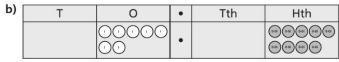
Lesson	1
LCJJCII	_

# Writing decimals

What numbers are shown on the place value grids?

a) 🗌	Т	0	•	Tth	Hth
0.		00000	•	01 01 01 01 01	







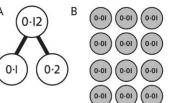
c)	Т	0	•	Tth	Hth
	(10)		•	01 01 01 01 01	

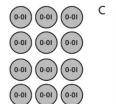
d) 🗌	Т	0	•	Tth	Hth
			•		00 00 00 00
_		•	* **		· ·

Complete the bar model and the calculation.

3-49	
3	0.09

3 Which image does not represent 0·12?





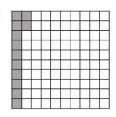




Image \_\_\_\_ does not represent 0·12.

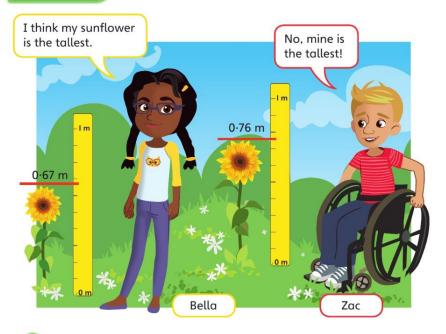
Complete the table.

a)	7 ones + 2 tenths + I hundredth	7.
b)	2 tens + 9 + 3 tenths + 4	q4
c)	hundred + ones +	I5·6
d)	I ten + 7 ones + I hundredth	
e)	5 tenths + 3 hundredths	$\bigcirc \cdot \bigcirc \bigcirc$
f)	53 hundredths	$\bigcirc \cdot \bigcirc \bigcirc$

what do you notice about e) and t)? why is this?

# **Comparing decimals**

### Discover



(1) a) Who is correct, Bella or Zac? Work out whether to use a < or > sign in the box.

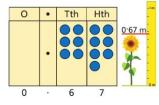
0.67 m 0.76 m

**b)** Another sunflower is 0.79 metres tall. Zac thinks this sunflower is taller than his sunflower.

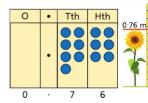
Is Zac correct? How do you know?

#### Share

a) The numbers 0.67 and 0.76 both have 0 ones.



I put the numbers in a place value grid. To compare the numbers, I started by looking at the tenths.





So, 0.76 is the largest number. Zac is correct.

0.67 m < 0.76 m

- < means less than or fewer than > means greater than
- b) Zac's sunflower is 0.76 metres tall.
- 0.76 = 7 tenths + 6 hundredths

0.79 = 7 tenths + 9 hundredths

0.79 has more hundredths than 0.76. So, 0.79 is greater than 0.76. Zac is correct.

I did not need to look at the hundredths column to compare the numbers.

0.76 and 0.79 have the same number of tenths.

To compare the numbers, I think I should look at the hundredths.



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### **Comparing decimals**

- Which number is larger? Circle the larger number on the left. Then write the signs in the circles on the right to make the statements correct.
  - a) 9.5 or 9.9

0	•	Tth
0000	•	01 01 01 01



0	•	Tth
	•	01 01 01 01 01

b) 8·I3 or 8·3I







c) 20·06 or 20·05



20.06 20.05



d) 100·25 or 100·52



(0.01) (0.01) (0.01) (0.00)

100.25 ( ) 100.52



(0.1) (0.1) (0.1)

Richard makes two numbers.

0	•	Tth	Hth
000	•	6160	(01)

0	•	Tth	Hth
000	•		00 00 00 00 00

He says that  $3\cdot21$  is less than  $3\cdot07$  because it uses fewer counters. Explain why Richard is not correct.

3 Which image shows the smaller number? Fill in the boxes.

0	•	Tth	Hth
	•	000	(i) (ii)





4 Complete each sentence using <, > or =.



d) 3·18 3·12

b) 12·9 () 18·7

e) 26·39 ( ) 27·49

c) 9.45 9.05

f) 120·26 ( ) 120·26

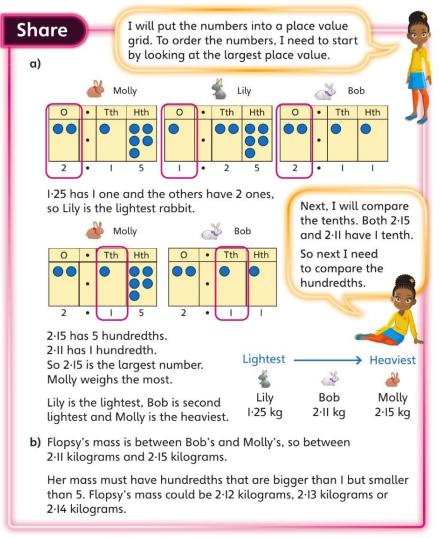
g) 3 tenths + 5 hundredths 5 tenths and 4 hundredths

### **Ordering decimals**

#### Discover



- a) Order the rabbits from the lightest to the heaviest.
  - b) A fourth rabbit, Flopsy, is weighed.
    Flopsy is the second heaviest out of the four rabbits.
    What might Flopsy's mass be?



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# Ordering decimals

Put these numbers in order starting with the smallest.







0	•	Tth	0
7	•	2	6

0	•	Tth
6	•	7

0	•	Tth
7	•	9

Smallest , Larg
-----------------

2 a) Which place value grid shows the greatest number?

Т	0	•	Tth	Hth
1	0	•	0	7

Т	0	•	Tth	Hth
1	0	•	7	9

Т	0	•	Tth	Hth
- 1	0	•	q	7

Т	0	•	Tth	Hth
- 1	0	•	0	q

b) Order the numbers from largest to smallest.

<b></b> ;	$\overline{}$	>	>	

a) Put the numbers in order starting with the smallest.

- 27.24
- 72.45
- 27.48
- 7.42
- Smallest Largest b) Put the numbers in order starting with the largest.
  - 4.59
  - 4.53
- 5.94
- 5.49

Smallest Largest

- Which of these lists of numbers is not in ascending order?
  - A 0.77, 0.78, 0.87

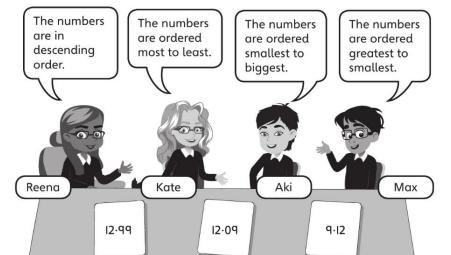
C 3.14, 3.41, 4.13, 4.31

**B** 0.2, 0.3, 0.7

23.2, 23.1, 23.3

List \_\_\_\_\_ is not in ascending order.

Which child is incorrect? Explain your answer.



### **Rounding decimals**

### Discover



- Round the amount of sugar to the nearest whole number.

  Is Mo correct?
  - **b)** What is the smallest possible amount of salt to one decimal place?

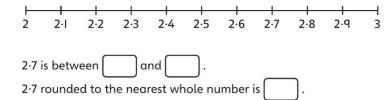
#### **Share** 6.8 is between 6 and 7 so I drew a number line going up in a) There are 6.8 grams of sugar in the cereal. tenths to help me round the number. 0.8 6-1 6-2 6-3 6-4 6-5 6-6 6-7 6-8 6-9 7 Look at the tenths. If there are 5 or more tenths, then we round up to the next whole number. 8 tenths is '5 or more', so 6.8 rounded to the nearest whole number is 7. Mo is correct. The amount of sugar is closer to 7 grams than 6 grams. b) 0 01 02 03 04 05 06 07 08 09 1 11 12 13 14 15 16 17 18 19 2 To find the smallest possible amount of salt, I know I is you need to look at the numbers below I. between 0 and 2. To round to the nearest whole number. I drew a different you need to look at the tenths which are number line to 5 or more. help me decide.

The smallest possible amount of salt is

0.5 grams.

# **Rounding decimals**

a) Round 2·7 to the nearest whole number.



b) Round 10.3 to the nearest whole number.

10	+ +	 ——  
10·3 is between and .		
10·3 rounded to the nearest whole number is	; .	

c) Round 28-3 to the nearest whole number.

1 1	1 1	į.		ř	1	ı
	' '	li.		,		
28·3 is between	and					
28·3 rounded to t	the nearest w	hole nur	mber is	<b></b>		

2 Round these numbers to the nearest whole number.

u)				
	Т	0	•	Tth
		00000	•	00000

T	0	•	Tth
00		•	00000

a)		rounded to the nearest whole number is	
b)	$\bigcap$	rounded to the nearest whole number is	$\bigcap$ .

b)

h) 89.9

Round these numbers to the nearest whole number.

<b>b)</b> 12·9 <b>f)</b> 150·2	
, , , , , , , , , , , , , , , , , , , ,	
c) 65·3 g) 400·l	

4	Which of these cannot be Mo's number?
	Explain your answer.

d) 0·4

55.2 54.8 54.5 55.5 55.1

I rounded a number
to the nearest
whole number.
The answer is 55.

		a

1		45	_	
- 1	1	4		
	ē	0	J	0
			-	y

Mo