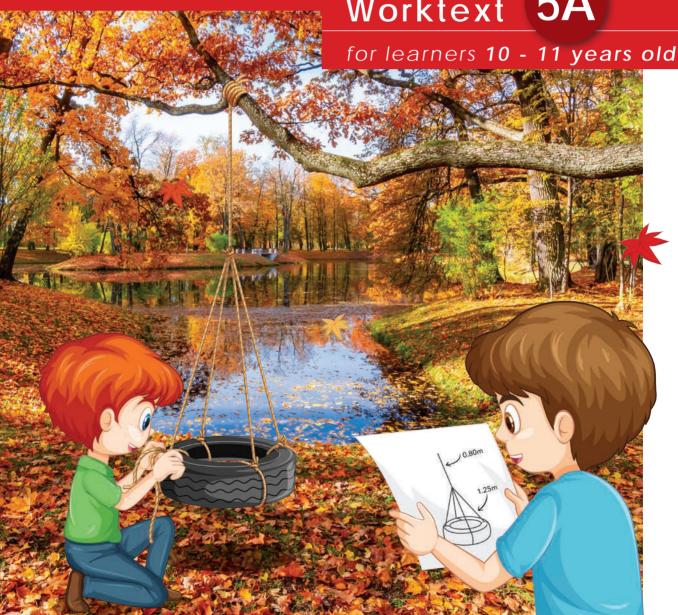
Let's Do MATHEMATICS

Worktext





Copyright © Blue Ring Media Pty Ltd Published under license by Regal Education Inc for the Middle East and Northern Africa.

This book or parts thereof may not be reproduced in any form, stored in any retrieval system, or transmitted in any form by any means – electronic, mechanical, photocopy, recording, or otherwise – without prior written permission of the copyright owner.

First edition 2021 This edition is published by Regal Education Inc. ISBN 978-1-953591-10-4



Regal Education Inc. 10 Pienza, Irvine, CA 92606, United States www.regaleducation.org





•

Let's Do Mathematics

Let's Do Mathematics is a series covering levels K-6 and is fully aligned to the United States Common Core State Standards (USCCSS). Each level consists of two books (Book A and Book B) and combines textbook-style presentation of concepts as well as workbook practice.

Central to the USCCSS is the promotion of problem-solving skills and reasoning. Let's Do Mathematics achieves this by teaching and presenting concepts through a problem-solving based pedagogy and using the concrete-pictorial-abstract (CPA) approach. Learners acquire knowledge and understanding of concepts through a guided progression beginning with concrete examples and experiences which then flow into pictorial representations and finally mastery at the abstract and symbolic level. This approach ensures that learners develop a fundamental understanding of concepts rather than answering questions by learned procedures and algorithms.

Key features of the series include:

♣ Anchor Task

Open-ended activities serve as the starting point for understanding new concepts. Learners engage in activities and discussions to form concrete experiences before the concept is formalized.

■ Let's Learn

Concepts are presented in a clear and colorful manner. Worked problems provide learners with guided step-by-step progression through examples. Series mascots provide guidance through helpful comments and observations when new concepts are introduced.





Let's Practice

Learners demonstrate their understanding of concepts through a range of exercises and problems to be completed in a classroom environment. Questions provide a varying degree of guidance and scaffolding as learners progress to mastery of the concepts.



Further practice designed to be completed without the guidance of a teacher. Exercises and problems in this section follow on from those completed under Let's Practice.

Hands On

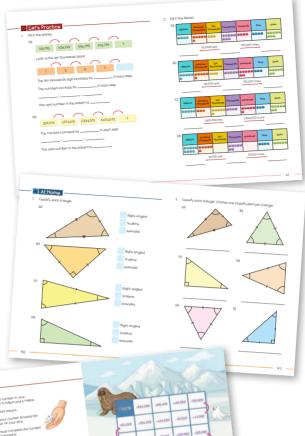
Learners are encouraged to 'learn by doing' through the use of group activities and the use of mathematical manipulatives.

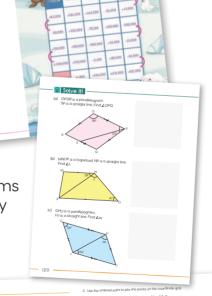
Solve It!

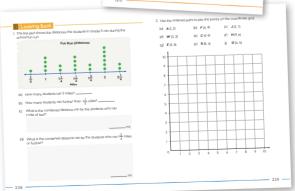
Activities that require learners to apply logical reasoning and problem-solving. Problems are often posed which do not have a routine strategy for solving them. Learners are encouraged to think creatively and apply a range of problem-solving heuristics.

Looking Back

Consolidated practice where learners demonstrate their understanding on a range of concepts taught within a unit.















Contents

1	Whole Numbers	2
	Numbers Beyond 1,000,000	4
	Place Value	15
	Powers of 10 and Exponents	26
	Comparing and Ordering Numbers	30
	Number Patterns	42
	Rounding and Estimation	55
2	Operations on Whole Numbers	66
	Addition and Subtraction	66
	Multiplying by 10s, 100s and 1,000s	75
	Multiplying by 1 and 2-digit Numbers	89
	Dividing by 10s, 100s and 1,000s	101
	Dividing by 1 and 2-digit Numbers	111
	Order of Operations	120
	Word Problems	128
3	Fractions	146
3		148
	Adding Fractions	
	Subtracting Fractions Multiplying Fractions	168
	Multiplying Fractions Fractions and Division	180
		197
	Word Problems	208
4	Decimals	224
	Tenths, Hundredths and Thousandths	224
	Comparing and Ordering Decimals	242
	Rounding and Estimation	256

Whole Numbers

Å Anchor Task

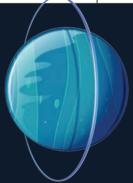






Diameter of Planets

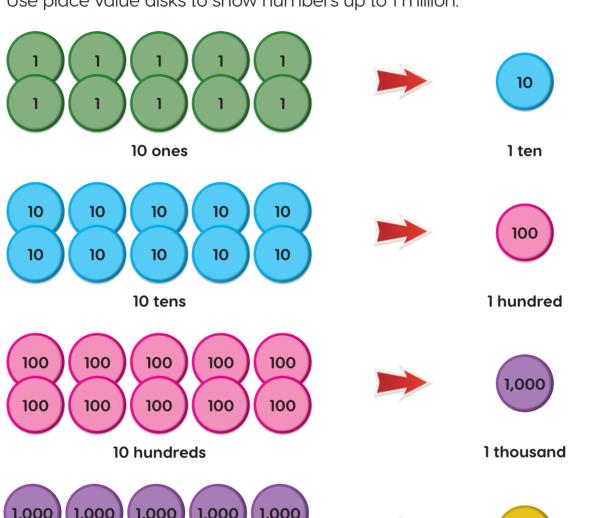
Planet	Diameter (km)		
Mercury	4,879		
Venus	12,104		
Earth	12,742		
Mars	6,779		
Jupiter	139,820		
Saturn	116,460		
Uranus	50,724		
Neptune	49,244		



Numbers Beyond 1,000,000

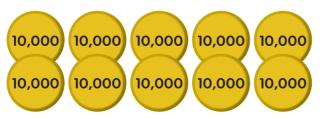
Let's Learn

Use place value disks to show numbers up to 1 million.









10 ten thousands





1 ten thousand



1 hundred thousand









10 hundred thousands

1 million



One million is a one followed by 6 zeros.

Find the number represented in the place value chart.

Ten Thousands Thousands Hundreds Tens Ones

We say: Thirty thousand, five hundred forty.

We write: 30,540.

Hundred Thousands Thousands Hundreds Tens Ones

Ones

We say: Five hundred forty thousand, nine hundred one.

We write: 540,901.

Hundred Thousands Ten Thousands Hundreds Tens Ones

We say: Three hundred fifty-one thousand, four hundred four.

We write: 351,404.

(d)

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
•••		••••			••••	••••

We say: Three million, sixty thousand, forty-five.

We write: 3,060,045.

(e)

I	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	0000			••••	••••	••••	0000

We say: Five million, five thousand, four hundred eighty-nine.

We write: 5,005,489.

(f)

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
00000	••••			••••		

We say: Six million, nine hundred fifty-four thousand, eight hundred.

We write: 6,954,800.

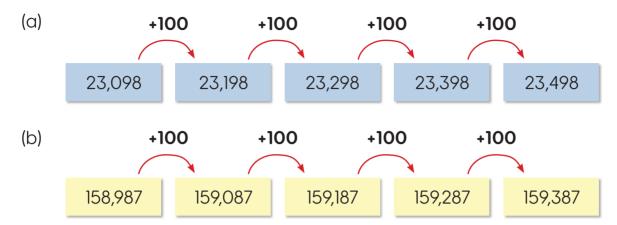
(g)

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
••••	••••			••••	••••	

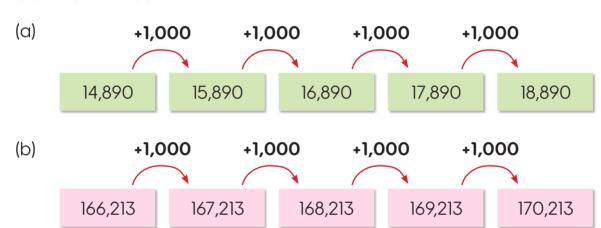
We say: Nine million, eight hundred thousand, six hundred fifty.

We write: 9,800,650.

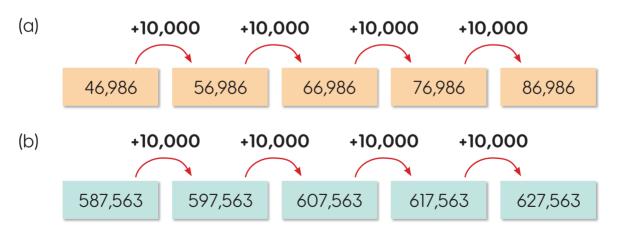
Count on in hundreds.



Count on in thousands.

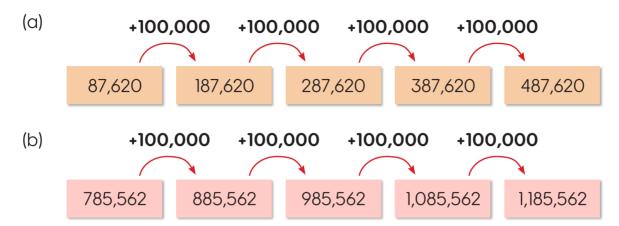


Count on in ten thousands.



(





Count on in millions.

2,425,352

3,425,352

4,425,352

5,425,352

6,425,352



1. Write as numerals and words.

Hundred Thousands Ten Thousands Hundreds Tens Ones

000

Hundred Thousands Ten Thousands Hundreds Tens Ones

Millions Hundred Ten Thousands Hundreds Tens Ones

9



Write the numbers.

(a) One hundred thousand, fifty-size

(b) Four hundred sixty thousand, eight hundred fifty-four.

(c) Nine million, four thousand, eighty-one.

(d) Five million, seven hundred eighty thousand, two hundred twelve.

Two million, seventy thousand, nine hundred thirty-five.

(f) Eight million, six hundred forty-five thousand, eight hundred eleven.

Write in words. 3.

(a) 1,758,284

(b) 4,576,264

9,649,538 (c)

- / -	▶,
- 1	
(-	-/
_	_

4.	Count	on in	1,000s

(a)	5,856,	 		
().,			•	

5. Count on in 10,000s.

6. Count on in 100,000s.

7. Count on in 1,000,000s.





Form pairs of students.

Each pair receives a dice and a place value chart. Roll the dice 7 times to form a 7-digit number. Write the number in the place value chart. Your teacher will say a count on number. Take turns counting on from your number.



Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones



At Home

1. Match.



seven hundred ninety thousand, thirty eight



230,400



two hundred thirty thousand, four hundred



8,444,080



eight million, four hundred forty-four thousand, eighty



650,366



nine million, two hundred thousand, six hundred two



790,038



six hundred fifty thousand, three hundred sixty-six



9,200,602

2. Write as numerals and words.

(a)	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	••••		•••	0000		

Millions Hundred Thousands Ten Thousands Hundreds Tens Ones

3. Count on in 10,000s.

- (a) **98,546**, _____, ____

4. Count on in 100,000s.

- (a) **54,570**, _____, ____

5. Count on in 1,000,000s.

(a) **24,641**, ______, _____



■ Let's Learn

Find the value of each digit in the numbers shown.

(a)

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	
•••			0000	••••	••••	00000	

The digit in the millions place is 3. It represents 3,000,000.

The digit in the hundred thousands place is 1. It represents 100,000.

The digit in the ten thousands place is 2. It represents 20,000.

The digit in the thousands place is 4. It represents 4,000.

The digit in the hundreds place is 6. It represents 600.

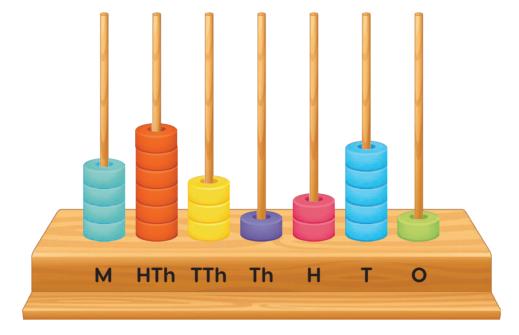
The digit in the tens place is 8. It represents 80.

The digit in the ones place is 7. It represents 7.

3,000,000 + 100,000 + 20,000 + 4,000 + 600 + 80 + 7 = 3,124,687



The number can be found by adding the place values of each digit!



The digit in the millions place is 4. It represents 4,000,000.

The digit in the hundred thousands place is 6. It represents 600,000.

The digit in the ten thousands place is 3. It represents 30,000.

The digit in the thousands place is 1. It represents 1,000.

The digit in the hundreds place is 2. It represents 200.

The digit in the tens place is 5. It represents 50.

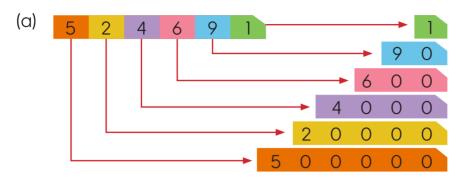
The digit in the ones place is 1. It represents 1.

4,000,000 + 600,000 + 30,000 + 1,000 + 200 + 50 + 1 = 4,631,251



What is the value of the digit in the millions place?

Let's find the value of each digit in the number.



The value of the digit 5 is 500,000.

The value of the digit 2 is 20,000.

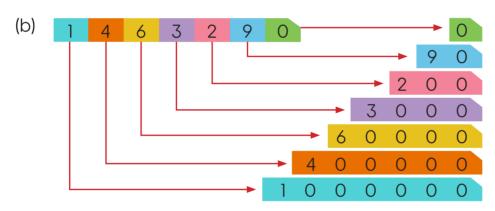
The value of the digit 4 is 4,000.

The value of the digit 6 is 600.

The value of the digit 9 is 90.

The value of the digit 1 is 1.

500,000 + 20,000 + 4,000 + 600 + 90 + 1 = 524,691



The value of the digit 1 is 1,000,000.

The value of the digit 4 is 400,000.

The value of the digit 6 is 60,000.

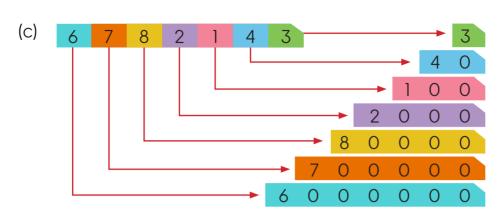
The value of the digit 3 is 3,000.

The value of the digit 2 is 200.

The value of the digit 9 is 90.

The value of the digit 0 is 0.

1,000,000 + 400,000 + 60,000 + 3,000 + 200 + 90 = 1,463,290



The value of the digit 6 is 6,000,000.

The value of the digit 7 is 700,000.

The value of the digit 8 is 80,000.

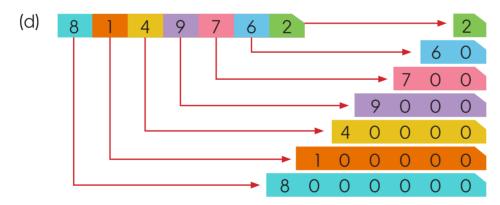
The value of the digit 2 is 2,000.

The value of the digit 1 is 100.

The value of the digit 4 is 40.

The value of the digit 3 is 3.

6,000,000 + 700,000 + 80,000 + 2,000 + 100 + 40 + 3 = 6,782,143



The value of the digit 8 is 8,000,000.

The value of the digit 1 is 100,000.

The value of the digit 4 is 40,000.

The value of the digit 9 is 9,000.

The value of the digit 7 is 700.

The value of the digit 6 is 60.

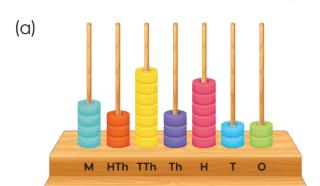
The value of the digit 2 is 2.

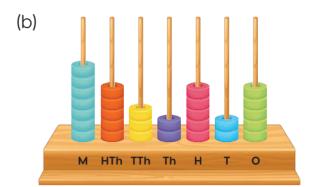
8,000,000 + 100,000 + 40,000 + 9,000 + 700 + 60 + 2 = 8,149,762

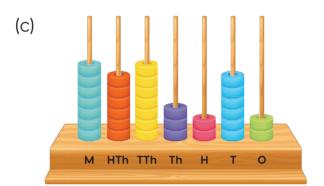


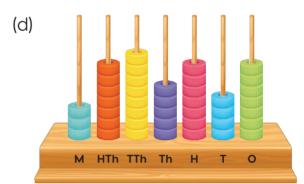
Let's Practice

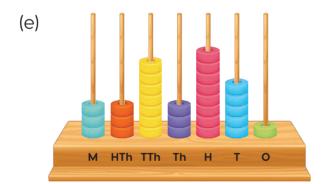
1. Write the numbers shown in the place value abacus.

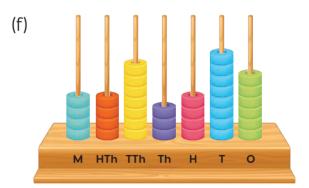




















2. Write the number in its expanded form.

(a) 546,540

(b) 5,265,640

(c) 4,729,572

(d) 1,730,275

(e) 6,289,365

3. Write the value of the digit.

(a) **437,863**

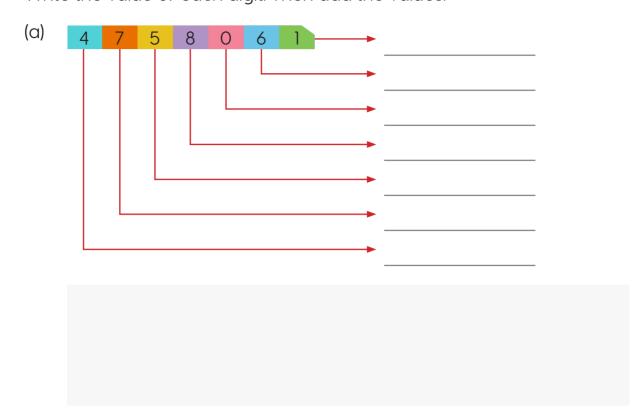
(b) **681,542**

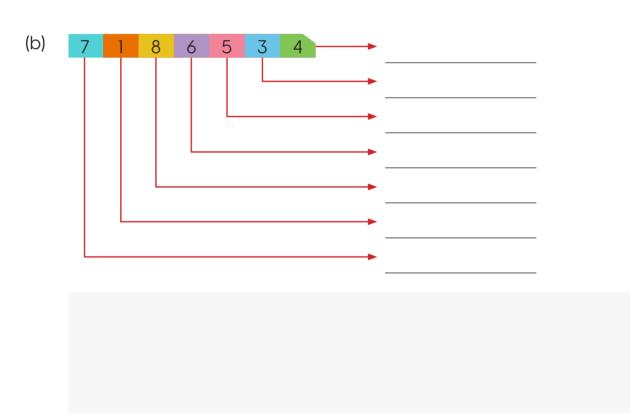
(c) **5,282,337**

(

(d) 9,373,201

4. Write the value of each digit. Then add the values.





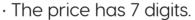
Solve It!

Halle is helping her father paint the house. She accidentally spills some paint onto the brochure containing the price for her new house. The real estate agent leaves some clues to help Halle and her father find the price of the house. Use the clues to help them find the house price!









- · The price is greater than 2 million and less than 3 million.
- · The price is an even number.
- · The sum of the digits in the hundreds, tens and ones place is 8.
- · The digit in the ten thousands place is 5.
- · No digit is equal to 4.
- \cdot All digits are less than 8 and no 2 digits are the same.

House price \$ ____ __ ___ ___ ____



1. Match the numbers in two ways.

K	ß	2	2	K	a	•
J	U	J,	0	J	J	

thousand, eight hundred fifty-nine

five hundred sixty-nine

 thousand, one hundred ninety-four

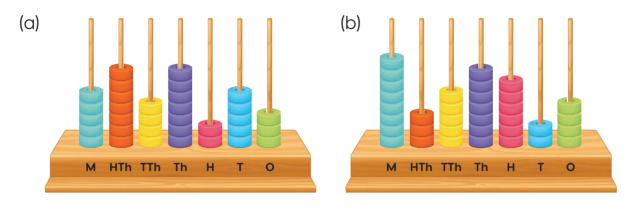
three million, seven hundred

 forty-eight thousand, one hundred sixty-seven

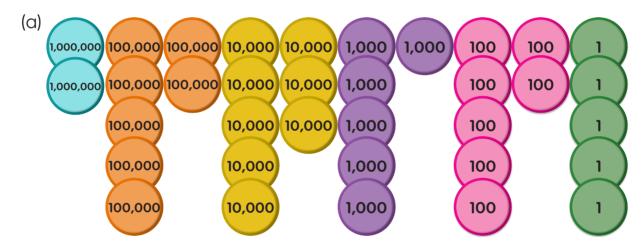
five million, one hundred

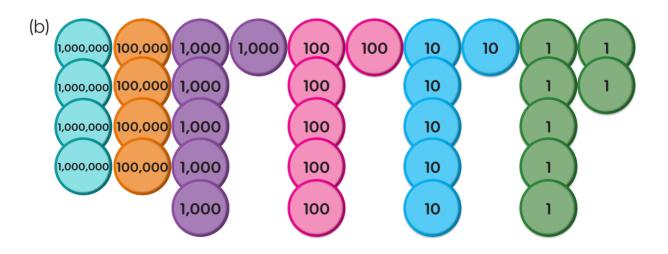
 seventy-eight thousand, one hundred ninety-three

2. Write the numbers shown in the place value abacus.



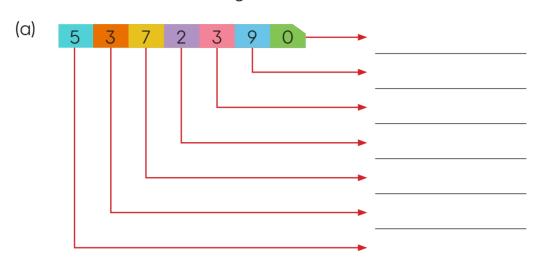
3. Write the numbers represented by the place value disks.











(



Powers of 10 and Exponents

Let's Learn

We can show repeated addition using multiplication.

$$10 + 10 + 10 + 10 = 40$$

 $4 \times 10 = 40$

Similarly, we can show repeated multiplication with exponents. Halle uses place value disks to show repeated multiplication of 10.

$$10 \times 10 \times 10 \times 10 = 10^4 = 10,000$$

The **base** is the number that is repeatedly multiplied.

The **exponent** tells how many times the base is multiplied.

We write: 10⁴

We say: the fourth power of 10

Let's look at the powers of 10 to 1,000,000.

1	10° = 1
1 x 10	10 ¹ = 10
1 x 10 x 10	102 = 100
1 x 10 x 10 x 10	103 = 1,000
1 x 10 x 10 x 10 x 10	104 = 10,000
1 x 10 x 10 x 10 x 10 x 10	105 = 100,000
1 x 10 x 10 x 10 x 10 x 10 x 10	106 = 1,000,000

Dominic read in his space book that the distance from Earth to the moon is about 4×10^5 km. Write the distance as a whole number.

$$10^5 = 100,000$$

$$4 \times 10^5 = 4 \times 100,000$$

= 400,000



Blue whales can reach a mass of 150,000 kg. Find the mass as a whole number multiplied by a power of 10.

$$150,000 = 15 \times 10,000$$

= 15×10^4

So, blue whales can reach a mass of 15×10^4 kg.



- 1. Write in exponent form in numbers and in words.
 - (a) $10 \times 10 \times 10$

Exponent form: _____ Word form: _____

(b) 10×10

Exponent form: _____ Word form: _____

- (c) 10 x 10 x 10 x 10

 Exponent form: _____ Word form: ______
- (d) 10 x 10 x 10 x 10 x 10 x 10 Exponent form: _____ Word form: _____
- 2. Write the number.

(a)
$$10^1 =$$
 (b) $10^2 =$

(c)
$$10^5 =$$

(e)
$$10^3 =$$
 _____ (f) $10^6 =$ _____

(g)
$$10^{\circ} =$$
 (h) $10^{7} =$

3. Write the number.

(a)
$$2 \times 10^2 =$$
 _____ (b) $3 \times 10^1 =$ _____

(c)
$$15 \times 10^3 =$$
 _____ (d) $25 \times 10^3 =$ _____

(e)
$$9 \times 10^5 =$$
 _____ (f) $3 \times 10^6 =$ _____

(g)
$$99 \times 10^2 =$$
 _____ (h) $10 \times 10^4 =$ _____



Match the numbers in two ways.

- 10
- 102 1,000
 - 10 × 10 × 10
- 104 •
- 1 01 a
 - 100
- 10³ 10 × 10 × 10 × 10
 - 10 x 10

Comparing and Ordering Numbers

Let's Learn

(a) Compare 1,422,645 and 1,432,523. Which number is greater?

	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	
		4	2	2	6	4	5	
ĺ	1	4	3	2	5	2	3	

First, compare the values in the millions place. The values in the millions place are the same. Compare the values in the next place – hundred thousands. The values in the hundred thousands place are also the same. Compare the values in the ten thousands place. 3 ten thousands is greater than 2 ten thousands.

So, 1,432,523 is greater than 1,422,645.

(b) Compare the numbers 3,619,381 and 3,619,728.

Millions		ıs	Hundred Thousands			Ten Thousands			Thousands			Hundreds		Tens		Ones	
	3		6			1		9			(,,		8	3	1		
	3			6			1			9		7	,	2	2	8	

The values in the millions, hundred thousands, ten thousands and thousands are the same. Compare the values in the hundreds place. 3 hundreds is smaller than 7 hundreds.