

MathSmart  
Guide  
Contents

**Chapter 1: Whole Numbers to 10 000**

- |     |                                |   |
|-----|--------------------------------|---|
| 1.1 | Writing Numbers to 10 000      | 4 |
| 1.2 | Comparing and Ordering Numbers | 5 |
| 1.3 | Rounding Numbers               | 6 |

**Chapter 2: Addition and Subtraction**

- |     |  |   |
|-----|--|---|
| 2.1 | Adding and Subtracting Using Mental Strategies | 7 |
| 2.2 | Adding and Subtracting Four-digit Numbers      | 8 |

**Chapter 3: Multiplication and Division**

- |     |                               |    |
|-----|-------------------------------|----|
| 3.1 | Multiplying One-digit Numbers | 10 |
| 3.2 | More Multiplying              | 11 |
| 3.3 | Dividing by One-digit Numbers | 12 |
| 3.4 | More Dividing                 | 13 |

**Chapter 4: Fractions**

- |     |                                  |    |
|-----|----------------------------------|----|
| 4.1 | Describing Parts with Fractions  | 14 |
| 4.2 | Comparing and Ordering Fractions | 15 |
| 4.3 | More about Fractions             | 16 |

**Chapter 5: Decimal Numbers to Tenths**

- |     |  |    |
|-----|--|----|
| 5.1 | Writing Decimal Numbers                | 18 |
| 5.2 | Comparing and Ordering Decimal Numbers | 19 |
| 5.3 | Adding and Subtracting Decimal Numbers | 20 |
| 5.4 | Fractions and Decimals                 | 21 |

**Chapter 6: Money**

- |     |                                      |    |
|-----|--------------------------------------|----|
| 6.1 | Representing Money Amounts to \$100  | 23 |
| 6.2 | Adding and Subtracting Money Amounts | 24 |

<b>Chapter 7: Measurement</b>	
7.1 Measuring Length	26
7.2 Measuring Mass	27
7.3 Measuring Capacity	28
7.4 Measuring Volume	29
<b>Chapter 8: Time</b>	
8.1 Measuring Time	31
8.2 Reading and Showing Time on Clocks	32
8.3 Finding Elapsed Time	33
<b>Chapter 9: Perimeter and Area</b>	
9.1 Finding Perimeter	34
9.2 Finding Area	35
9.3 Relating Perimeter and Area	36
<b>Chapter 10: Two-dimensional Shapes</b>	
10.1 Identifying Angles	39
10.2 Classifying Quadrilaterals	40
<b>Chapter 11: Three-dimensional Figures</b>	
11.1 Naming and Describing 3-D Figures	41
11.2 Constructing 3-D Figures	42
<b>Chapter 12: Locations and Movements</b>	
12.1 Locations and Movements on a Grid Map	45
12.2 Making and Describing Reflections	46
<b>Chapter 13: Patterning</b>	
13.1 Describing Numeric and Geometric Patterns	47
13.2 Solving Equations	48
13.3 Using Properties of Multiplication	49
<b>Chapter 14: Data Management and Probability</b>	
14.1 Analyzing and Displaying Data	51
14.2 Finding the Frequency of an Outcome	53
<b>Application Answers</b>	55

# Chapter 1

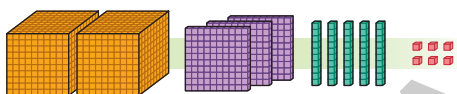
## Whole Numbers to 10 000

### 1.1 Writing Numbers to 10 000

At this level, your child is expected to be able to write numbers up to 1000. In this unit, he or she will learn to write numbers up to 10 000. You may use drawings to help your child understand the value of thousands.

#### Writing Numbers in Different Forms

Place value chart: shows the positions of the digits in a number



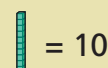
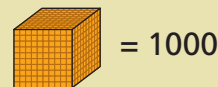
Thousands	Hundreds	Tens	Ones
2	3	5	6

2000    300    50    6

#### Value of a digit

depends on its position in a number  
e.g. 2 has a value of 2000.

#### Base-ten Blocks

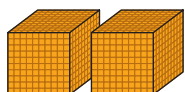


Standard form : 2356

Expanded form : 2000 + 300 + 50 + 6

"0" is a place holder.  
Don't leave it out.

e.g.



→ 2005 (not 25)  
place holders



#### Writing Numbers in Words

Encourage your child to say the numbers they find in words.

e.g. number of pages in a book  
amount of juice in a bottle

Be extra careful when there are zeros in a number.

e.g. 405 → four hundred **five**

450 → four hundred **fifty**

## 1.2 Comparing and Ordering Numbers

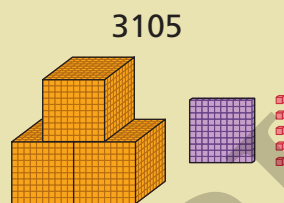
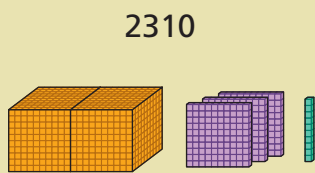
In this unit, your child will learn to represent and compare whole numbers up to 10 000 using base-ten blocks, number lines, and digit comparisons.

### Way 1 Using Base-ten Blocks

**1st** Draw base-ten blocks to represent the numbers.

**2nd** Compare the number of blocks each number has. The number that has more blocks is greater.

e.g.



3105 has more blocks, so it is greater.

### Way 2 Using a Number Line

**1st** Mark the numbers on a number line.

**2nd** The number that is farthest to the right is the greatest.

e.g.



3832 is farthest to the right, so it is the greatest.

### Way 3 Comparing Digits

**1st** Write the numbers on a place value chart.

**2nd** Compare the thousands. If the digits are the same, compare the hundreds, and so on, until the digits are different.

e.g.

Th	H	T	O
3	6	9	2
3	6	8	4
↑	↑	↑	
same	same	$9 > 8$	

3692 is greater.