

## Theme

## 1

## Numbers and numeration

## Whole numbers: Up to millions

**Unit 1** Count, read and write numbers up to millions

In Primary 4, you read and counted numbers into millions in 1s, 10s, 100s and 1 000s. In this unit, you will build on what you know about counting into millions. You will **read**, **write** and **count** numbers in **thousands** and **millions** (1 000 000s) and use the **abacus** to form and read numbers. You will work with the **population** of your country to help you understand numbers into millions.

Do you remember where we use counting into millions in real life?

**Example**

In 2015, the population of Nigeria was estimated at **183 523 432**; in 2014 it was **178 516 904** and in 2010 it was **159 707 780**.

Explore these numbers in the table. Read the numbers aloud.

Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Units
M	HTH	TTH	TH	H	T	U
1 000 000	100 000	10 000	1 000	100	10	1
183	5	2	3	4	3	2
178	5	1	6	9	0	4
159	7	0	7	7	8	0

We write **183 523 432** in words as:

One hundred and eighty-three **million** five hundred and twenty-three **thousand** four **hundred** and thirty-two

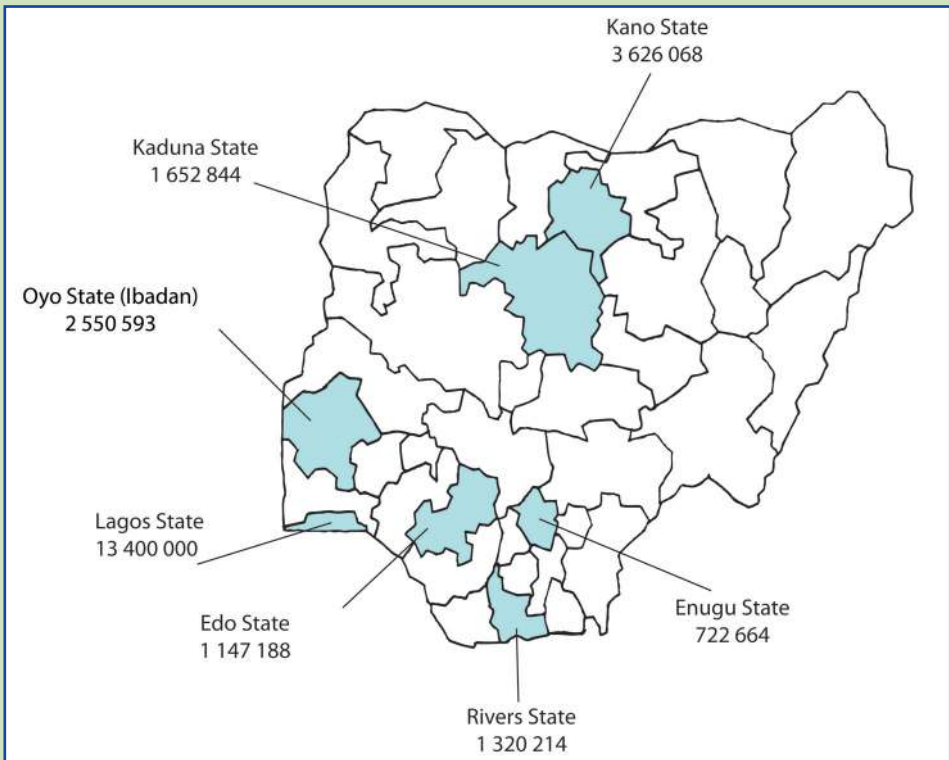
Write the numbers 178 516 904 and 159 707 780 in words.

We leave a **space** between the **millions** and **hundred thousands**, and **thousands** and **hundreds** to make it easy to read the numbers.

## Read and write numbers up to millions

### Example

Explore the map of the states of Nigeria and the number of inhabitants (population) living in each state.



Read the name of each state shown and its population.

1. Which state has the highest population?
2. Which state has the lowest population?
3. Write the number of people in the Kano State in words.

### Solutions

1. Lagos State
2. Enugu State
3. three million six hundred and twenty-six thousand and sixty-eight

## Exercise 1

- Write the name of each state and its population on the map on page 2 from the lowest to the highest population.
- Write the population of each state in words.
- Estimate how many more people (in millions) are in Lagos State than in Kano State.

## Exercise 2

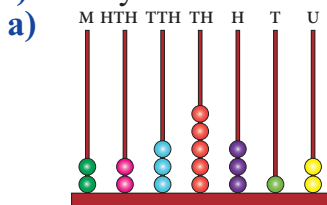
- Write these numbers in words.
  - 645 750
  - 865 250
  - 1 115 500
  - 3 675 000
  - 10 104 104
  - 18 123 321
  - 135 869 800
  - 900 003 040
- Write these number names in symbols.
  - one million two hundred thousand
  - eight hundred and ninety-five thousand
  - twenty-five million seven hundred and eighty-one thousand six hundred and forty
  - six hundred and fifty-nine thousand three hundred and twenty-five
  - one hundred million fourteen thousand one hundred and fifty
  - four million twenty-five thousand

## Exercise 3

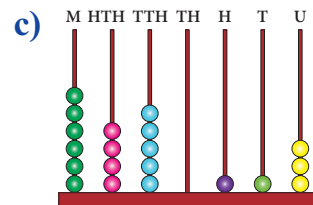
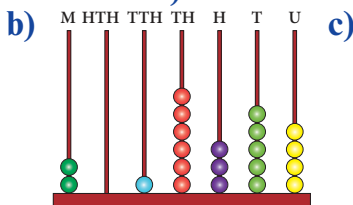
- Write the numbers below from the smallest to the largest.
  - 928 002; 775 421; 698 866; 815 336
  - 1 784 231; 1 482 869; 1 832 146; 1 696 122
  - 3 357 298; 5 677 125; 3 375 298; 5 767 125
  - 13 635 726; 15 228 503; 14 621 826; 16 468 183
  - 38 998 998; 33 242 242; 36 175 175; 34 809 809

- Write the numbers represented on each abacus:

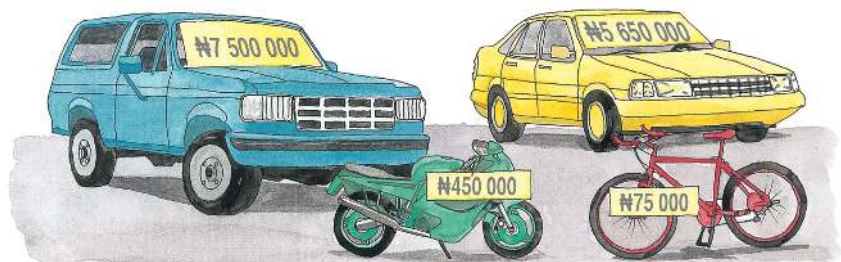
i) in symbols



ii) in words.



3. a) Which form of transport in the pictures is the most expensive?  
 b) How much does each item cost?  
 c) Which item is the cheapest?



4. Use the digits below to write a number that is:

2	5	4	1	7	4
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- a) greater than 655 276  
 b) greater than 749 148  
 c) less than 366 931.

Complete Exercise 1, Unit 1 in your workbook.

## Count in thousands and millions

### Example

It is said that, every day, all over the world, 20 000 000 (20 million) yellow pens are sold. How many pens are sold in a week? How many pens are sold in a month? (Use a five-day week.)

Tutu **counts on** to find the number of pens sold in a month.

20 000 000; 40 000 000; 60 000 000; 80 000 000; 100 000 000

100 000 000 pens were sold in a week.

100 000 000; 200 000 000; 300 000 000; 400 000 000

400 000 000 were pens sold in a month.

Wole **multiplies** to find the number of pens sold in a month.

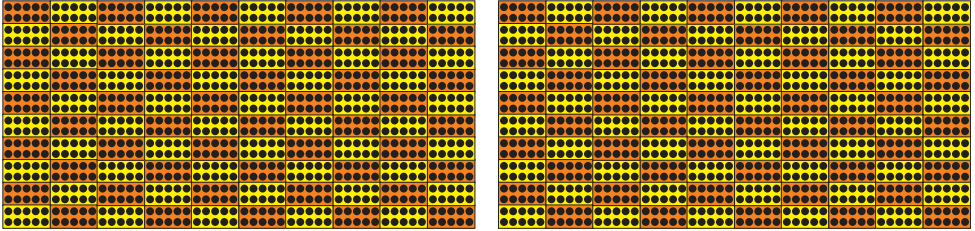
20 million  $\times$  5 = 100 million pens sold per week

100 million  $\times$  4 = 400 million pens sold per month

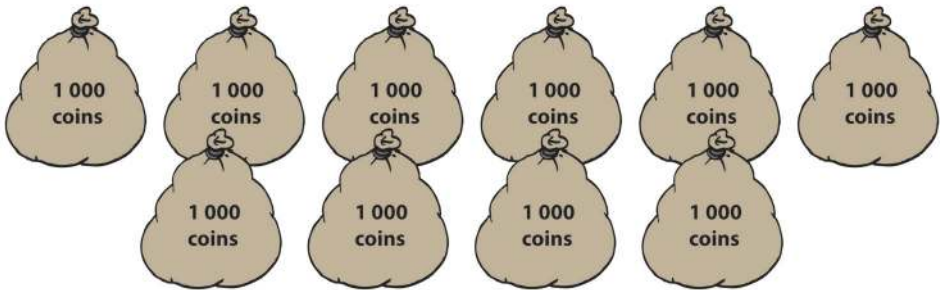
Which number do you find easier to read, 20 million or 20 000 000?

### Exercise 4

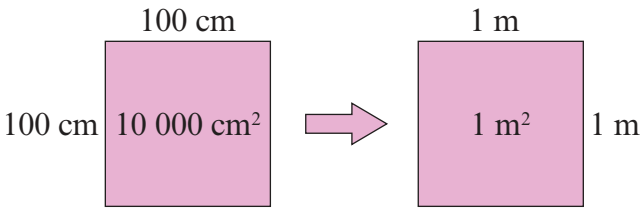
1. How many dots are there altogether in both diagrams?



2. Count the total number of coins in the moneybags.

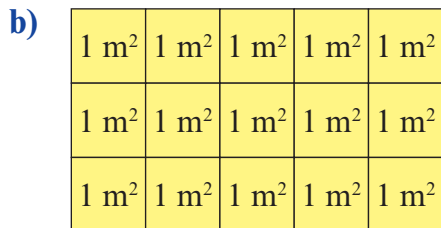
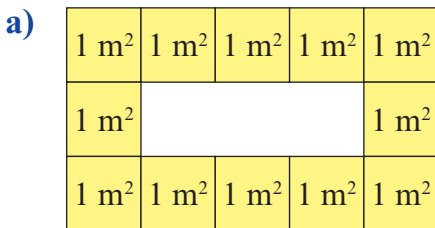


Look at the square units of length measurement.

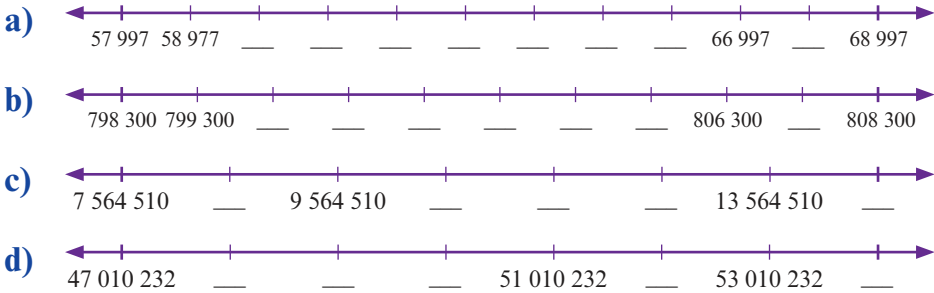


When you measure **area**, you work with **square units**.

3. How many square centimetres (cm<sup>2</sup>) are in each diagram?



4. Copy the number lines. Fill in the missing numbers.



A **number pattern** such as 1 000; 2 000; 3 000; ... is also called a **number sequence**.

### Exercise 5

1. Fill in the next three numbers in each number pattern.

- a) 6 000; 7 000; 8 000; \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_  
 b) 26 100; 27 100; 28 100; \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_  
 c) 97 000 000; 98 000 000; \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_  
 d) 125 500; 126 500; 127 500; \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_  
 e) 398 453 012; 399 453 012; \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_

2. Write the next number in each sequence.

- a) four thousand and fifty; five thousand and fifty; six thousand and fifty; \_\_\_\_\_  
 b) eight million and twenty; nine million and twenty; ten million and twenty; \_\_\_\_\_  
 c) seventeen thousand four hundred; eighteen thousand four hundred; \_\_\_\_\_  
 d) five hundred thousand and ninety; six hundred thousand and ninety; \_\_\_\_\_

3. Write the numbers in question 2 in symbols.

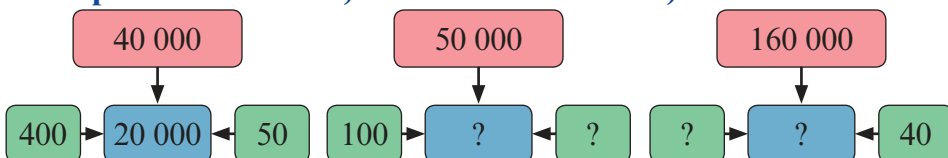
4. Write these numbers in symbols.

- a) 18 thousand      b) 74 million      c) 49 million  
 d) 876 thousand    e) 350 million      f) 1 050 million

## Quantitative reasoning

5. Fill in the missing numbers in each diagram.

### Example



6. Study the extract from a newspaper article.

3 August

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The National Elephant Park had a total of 5 000 visitors in January. They hope to reach a target of  $\frac{1}{4}$  million visitors by the end of December.

- At this rate, will the park reach its target by December?
  - How many people should visit per month to reach the target?
7. A soccer stadium can seat fifty-four thousand fans. If two of the three soccer games at the stadium in February were sold out, and the third was cancelled, how many tickets were sold for soccer games at the stadium in February?
8. Adaeze bought a box of beads for herself. There are one thousand two hundred beads in the box.
- Adaeze decides to buy a box of beads for her mother, a box for her aunt and a box for her sister. How many beads did she purchase altogether, including her own beads?
  - Adaeze's friend, Zainab, boasts that her box is better because it contains one thousand nine hundred and ninety-nine beads. Is she correct? Who has more beads and how many more does she have?

Complete Exercise 2, Unit 1 in your workbook.



## Theme

## 1

## Numbers and numeration

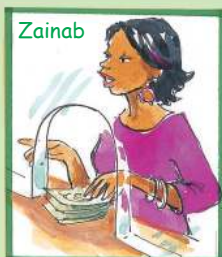
## Whole numbers: Place value

## Unit 2 Find place value of whole numbers

In this unit, you will work with the **place value** of **whole numbers** up to **millions**. You will identify the place value and **value** of **digits** in numbers, and also use place value **tables** and **overlay cards** to build numbers.

## Example

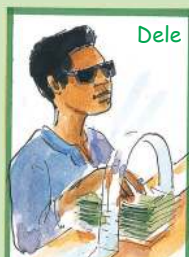
Explore the amounts that the people are banking in the pictures.



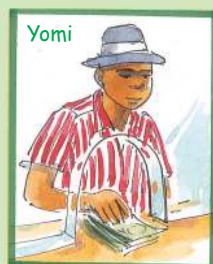
₦60 000 (TTH)



₦5 (U)



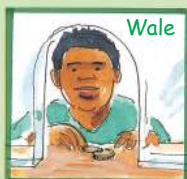
₦2 000 000 (M)



₦700 000 (HTH)



₦3 000 (TH)



₦90 (T)



₦800 (H)

- Who is banking amounts in:
  - units
  - millions
  - hundred thousands
  - thousands
  - ten thousands
  - hundreds
  - tens?
- What is the total amount that the people are banking?



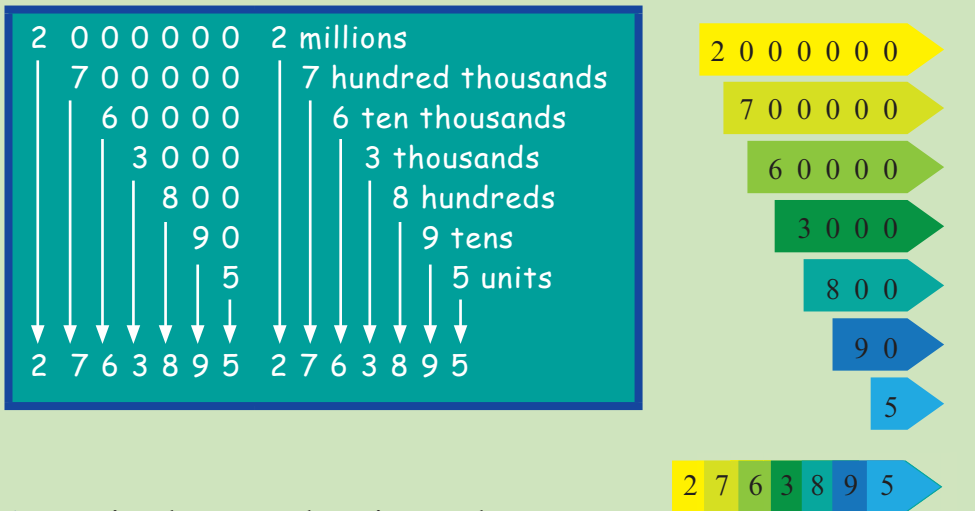
**Solutions**

1. a) Moji            b) Dele            c) Yomi            d) Femi  
 e) Zainab          f) Nike            g) Wale
2.  $\cancel{N}60\,000 + 5 + 2\,000\,000 + 90 + 3\,000 + 800 + 700\,000 = \cancel{N}2\,763\,895$

**Place values and values of digits in numbers**

**Example**

We can write the total amount that the people are banking in **expanded notation** using **values** and **place values** and show it on overlay cards. Read the amount aloud.



1. Write these numbers in words.

- a) b) c)

2. Write the numbers in a place value table.

**Solutions**

1. a) three hundred and fifty-four thousand, three hundred and seventy-six  
 b) six hundred and seventy thousand, four hundred and eighty-one  
 c) four million, two hundred and fifty-six thousand and ninety-one

2.

	M	HTH	TTH	TH	H	T	U
a)		3	5	4	3	7	6
b)		6	7	0	4	8	1
c)	4	2	5	6	0	9	1

### Exercise 1

- Write the numbers in the example in expanded notation. For each number, use the values and the place values to expand the numbers.
- Write the numbers that are represented in expanded notation.
  - $700\,000 + 50\,000 + 3\,000 + 900 + 20 + 1$
  - $3\,000\,000 + 600\,000 + 10\,000 + 1\,000 + 90 + 3$
  - $60 + 70\,000 + 800\,000 + 4\,000 + 4$
  - 2 hundred thousands + 9 ten thousands + 2 thousands + 3 hundreds + 2 tens + 1 unit
  - 8 ten thousands + 7 millions + 9 hundreds + 5 units
  - 1 hundred thousand + 5 hundred thousands + 9 thousands + 1 thousand
- Write the values of the underlined digits.
  - $\underline{3}54\,\underline{3}76$
  - $6\underline{7}0\,4\underline{8}1$
  - $\underline{4}\,256\,09\underline{1}$
  - $2\,6\underline{2}3\,\underline{1}54$

### Exercise 2

- Write the values of the underlined digits.
  - $678\,3\underline{1}2$
  - $78\underline{5}\,423$
  - $893\,\underline{5}26$
  - $973\,61\underline{5}$
  - $1\,7\underline{8}4\,231$
  - $1\,472\,\underline{8}69$
  - $49\,61\underline{7}$
  - $78\underline{1}\,564$
  - $\underline{3}\,456\,298$
  - $9\,0\underline{3}2$
  - $\underline{8}29\,651$
  - $4\underline{5}1\,052$