

WHOLE NUMBERS

A DEFINITIONS

Definition Base 10 system

In the base 10 system, the place of a digit in a number determines its value. We can represent the number 32 354 in several ways:

- **With digits:**

32 354

- **In expanded form:**

3 ten-thousands + 2 thousands + 3 hundreds + 5 tens + 4 ones
30 000 + 2 000 + 300 + 50 + 4
 $3 \times 10\,000 + 2 \times 1\,000 + 3 \times 100 + 5 \times 10 + 4 \times 1$

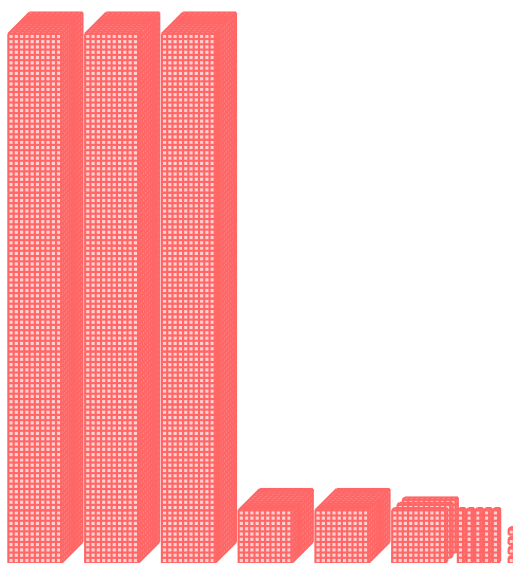
- **With words:**

thirty-two thousand three hundred fifty-four

- **In a table:**

Ten-Thousands	Thousands	Hundreds	Tens	Ones
3	2	3	5	4

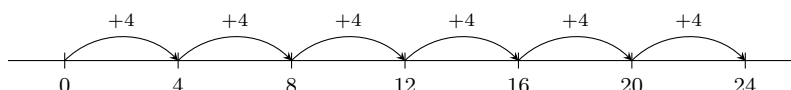
- **With cubes:**



B ON THE NUMBER LINE

Definition Number Line

A **number line** is a line that shows numbers in order. Moving right adds by same number.



C BIG NUMBERS

Definition Understanding Place Value

Big numbers are written using the place value system:

- A **thousand** is 1 000 ones, or 1 000.
- A **million** is 1 000 thousands, or 1 000 000.
- A **billion** is 1 000 millions, or 1 000 000 000.

We can write a number in three ways:

- **With digits:**

340 120 000 000

- **With words:**

three hundred forty billion one hundred twenty million

- **In a table:**

billions			millions			thousands			units		
H	T	U	H	T	U	H	T	U	H	T	U
3	4	0	1	2	0	0	0	0	0	0	0