

Luna's Space Adventure

Grade 4 · Place value to a billion · 4.2B

Name _____

Date _____



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

What is the digit worth? Find the place, then write its value.

In 316,388,421, the thousands digit is worth _____

In 899,169,968, the ten millions digit is worth _____

In 458,864,580, the ten thousands digit is worth _____

In 229,823,922, the thousands digit is worth _____

Words to digits Write each number with digits and commas.

nine hundred eighty million two hundred one _____

one billion _____

Expanded form Write it as a sum of place values.

40,420,000 = _____

530,009,000 = _____

Compare Line up the places and compare from the left.

117,582,591 is ____ 57,582,591 **greater than** **less than**

108,326,325 is ____ 108,326,305 **greater than** **less than**

178,859,524 is ____ 179,059,524 **greater than** **less than**

256,268,641 is ____ 256,276,641 **greater than** **less than**

Order them Write them from least to greatest.

598,425,000 · 542,633,000 · 565,968,000 _____

196,328,000 · 184,039,000 · 177,701,000 _____



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ANSWER KEY



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

What is the digit worth? Find the place, then write its value.

In 316,388,421, the thousands digit is worth

8,000

In 899,169,968, the ten millions digit is worth

90,000,000

In 458,864,580, the ten thousands digit is worth

60,000

In 229,823,922, the thousands digit is worth

3,000

Words to digits Write each number with digits and commas.

nine hundred eighty million two hundred one

980,000,201

one billion

1,000,000,000

Expanded form Write it as a sum of place values.

40,420,000 =

40,000,000 + 400,000 + 20,000

530,009,000 =

500,000,000 + 30,000,000 + 9,000

Compare Line up the places and compare from the left.

117,582,591 is ____ 57,582,591

greater than

less than

108,326,325 is ____ 108,326,305

greater than

less than

178,859,524 is ____ 179,059,524

greater than

less than

256,268,641 is ____ 256,276,641

greater than

less than

Order them Write them from least to greatest.

598,425,000 · 542,633,000 · 565,968,000

542,633,000 < 565,968,000 < 598,425,000

196,328,000 · 184,039,000 · 177,701,000

177,701,000 < 184,039,000 < 196,328,000



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GUIDE

1 What this sheet practises

Place value up to a billion: what each digit is worth, reading numbers from words, expanded form, and comparing and ordering big numbers.

2 A problem from the sheet, worked out

What is the digit worth? Find the place, then write its value.

In 316,388,421, the thousands digit is worth

8,000

In 899,169,968, the ten millions digit is worth

90,000,000

In 458,864,580, the ten thousands digit is worth

60,000

In 229,823,922, the thousands digit is worth

3,000

How: Group the digits in threes from the right: ones, thousands, millions, billions. Each place is worth ten times the place to its right.

3 Words to know

million a thousand thousands: 1,000,000

billion a thousand millions: 1,000,000,000

period a group of three places between commas

value what a digit is worth in its place

4 Watch for

- Writing the digit instead of its value: 6 instead of 60,000,000.
- Dropping zeros in the middle: 305,020,700 written as 35,027.
- Comparing numbers with different numbers of digits from the right.

5 Where it fits

BEFORE

4.NBT.A.2

Read, write and compare multi-digit numbers.

THIS SHEET

4.2B

Write the value of digits in whole numbers to billions and decimals to hundredths, in expanded form.

NEXT

5.NBT.A.1

Understand that each place is ten times the place to its right and a tenth of the one to its left.

6 Helping at home

Look up a population or distance in the millions and read it aloud together, then ask what the 7 in it is worth.

