

LESSON ORGANIZER

40–50 min

Curriculum Focus: Read and write whole numbers up to and greater than one million. (6N1)

Teacher Materials

- *Guinness World Records* (optional)
- place-value charts copied onto overhead transparency

Student Materials *Optional*

- place-value charts
- 3-column charts (PM 20)
- calculators
- Step-by-Step 1 (Master 2.15)
- Extra Practice 1 (Master 2.25)

Vocabulary: period, billion, trillion

Assessment: Master 2.2 Ongoing Observations:
Understanding Number

Key Math Learnings

1. Large numbers are organized into groups of three place values. Each group is called a period.
2. Within each period, the digits are read as hundreds, tens, and ones.
3. When we read large numbers, we say the period name after each period except the units period.
4. When we write a number with five or more digits, we leave a space between the periods.

Let's try together

Sheet from Yesterday

#2) Write the following in expanded form

a) 526 647 023

$$500\,000\,000 + 20\,000\,000 + 6\,000\,000 + 600\,000 + 40\,000 + 7\,000 + 20 + 3$$

b) 45 506 420 000

$$40\,000\,000\,000 + 5\,000\,000\,000 + 500\,000\,000 + 6\,000\,000 + 400\,000 + 20\,000$$

#3) a) Write the number that is 1 000 000 more than 863 000 (Show work or explain how you know)

$$\begin{array}{r} 1\,000\,000 \\ + 863\,000 \\ \hline 1\,863\,000 \end{array}$$

#3) b) Write the number that is 10 000 less than 63 625 301 (Show work or explain how you know)

$$\begin{array}{r} 63\,625\,301 \\ - 10\,000 \\ \hline 63\,615\,301 \end{array}$$



Warm up Grade 6

Date: _____



1) List the following integers from greatest to least (descending)
- 10, -5, +3, -7, 0, +10

2) Use tiles to represent a) -5 b) +2

3) Write 81 023 006 in expanded form

4) Write the number that is 100 000 more than 65 487 211

Homework Solutions

Page 48-49

1a) $20\,000\,000 + 4\,000\,000 + 300\,000 + 40\,000 + 2000 + 500 + 200$

b) 6 million 276 thousand 89

c) two billion four hundred sixty million sixty-nine thousand eight

2) How many times great as 1000 is 1 000 000?

3) Write Expanded
a) 75 308 403

$70\,000\,000 + 500\,000 + 3000\,000 + 8000 + 400 + 3$

b) 64 308 470 204

$64\,000\,000\,000 + 4\,000\,000\,000 + 300\,000\,000 + 8\,000\,000 + 400\,000 + 70\,000 + 200 + 4$

c) 99 300 327

$90\,000\,000 + 9\,000\,000 + 300\,000 + 300 + 20 + 7$

4) Value of Place underlined

a) $6\underline{2}7\,384$
20 000

b) $5\underline{4}\,286\,473$
4 000 000

c) $41\,\underline{9}62\,014$
900 000

d) $2\underline{5}\,041\,304\,000$

5 000 000 000

Homework Solutions

#5, 6

5) a) 10 000 more than
$$\begin{array}{r} 881\ 462 \\ + 10\ 000 \\ \hline 891\ 462 \end{array}$$

← this is how I know

b) 100 000 less than
$$\begin{array}{r} 2\ 183\ 486 \\ - 100\ 000 \\ \hline 2\ 083\ 486 \end{array}$$

c) 1 000 000 more than
$$\begin{array}{r} 746\ 000 \\ + 1\ 000\ 000 \\ \hline 1\ 746\ 000 \end{array}$$

d) one million less than
$$\begin{array}{r} 624\ 327\ 207 \\ - 1\ 000\ 000 \\ \hline 623\ 327\ 207 \end{array}$$

6) China → one billion three hundred twenty-one million eight hundred fifty-one thousand eight hundred eighty-eight

Standard | 3 2 1 8 5 1 8 8 8

Expanded

$$1\ 000\ 000\ 000 + 300\ 000\ 000 + 20\ 000\ 000 + 1\ 000\ 000 + 800\ 000 + 50\ 000 + 1000 + 800 + 80 + 8$$

Let's try some more

#1) Write the following in standard form

a) $40\,000\,000 + 2\,000\,000 + 60\,000 + 400 + 60 + 1$

42 060 461

b) (21) billion 485 million 222 thousands 43

21 485 222 043
 bil mill thou unit

c) twenty-six trillion four hundred eighty-one billion two million three hundred forty-three thousands two

26 481 002 343 002
 tri bi mil th unit

2) a) Write the number that is 10 000 less than 2 456 872

(Show work or explain how you know)

Subtraction
Big-Small

2 456 872
 $-$ 10 000
 2 446 872

b) Write the number that is one million more than 754.625 287

(Show work or explain how you know)

Addition

754 625 287
 $+$ 1 000 000
 755 625 287

Let's try together

#3) Write the following in expanded form

a) 8 985 600 021

$$8 \text{ 000 000 000} + 900 \text{ 000 000} + 80 \text{ 000 000} + 600 \text{ 000} + 20 + 1$$

#4) Write the number that is 200 000 greater than 289 507 401 (Show work or explain how you know)

$$\begin{array}{r}
 289 \ 507 \ 401 \\
 + \quad \quad 200 \ 000 \\
 \hline
 289 \ \underline{707} \ 401
 \end{array}$$

add

Class/Homework

Page 48-49

1abc, 2, 3ab, 4ab, 5abc, ~~6~~

If you need more but #6, 11

Extra Practice 1 & 1b is still available

AND worksheet ????

$$\begin{aligned} 1) a) & 20\,000\,000 + 4\,000\,000 + 300\,000 + 40\,000 \\ & + 2000 + 500 + 80 + 4 \end{aligned}$$

24 342 584

b) 6 million 276 thousand 89

~

$$2) \quad 1\,000\,000 \div 1\,000$$

$$1000000 \div 1000 = 1000$$

$$1000 \times 1000 = 1000000$$

So 1,000,000 is 1000 times larger than 1000

Practice

1. Write each number in standard form.

a) $20\,000\,000 + 4\,000\,000 + 300\,000 + 40\,000 + 2000 + 500 + 80 + 4$

b) 6 million 276 thousand 89

c) two billion four hundred sixty million sixty-nine thousand eighteen

2. How many times as great as one thousand is one million?
Use a calculator to check your answer.

3. Write each number in expanded form.

- a) 75 308 403 b) 64 308 470 204 c) 99 300 327

4. Write the value of each underlined digit.

a) 627 384

b) 54 286 473

c) 41 962 014

d) 25 041 304 000

5. Write the number that is:

a) 10 000 more than 881 462

c) 1 000 000 more than 746 000

Tell how you know.

b) 100 000 less than 2 183 486

d) one million less than 624 327 207

6. China is the most populated country in the world. In 2007, it had an estimated population of one billion three hundred twenty-one million eight hundred fifty-one thousand eight hundred eighty-eight.
Write this number in standard form and in expanded form.

7. The largest known prehistoric insect is a species of dragonfly.
It lived about 280 000 000 years ago.
Write this number in words.



8. North America's largest shopping centre is in Edmonton, Alberta.
It covers an area of 492 386 m² and cost about \$1 200 000 000 to build.
Write these numbers in a place-value chart.



9. A student read 3 000 146 as “three thousand one hundred forty-six.”
How would you explain the student’s error?

10. I am a number between 7 000 000 and 8 000 000.
All my digits are odd.
All the digits in my thousands period are the same.
All the digits in my units period are the same.
The sum of all my digits is 31.
What number am I?
Give as many answers as you can.
What strategies did you use to find the
mystery number?



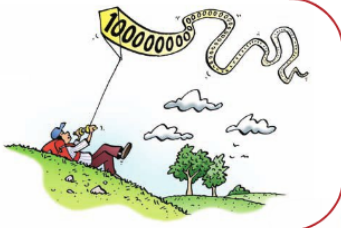
11. In November, 2005, six-year-old Brianna Hunt found a fossilized squid near her home on the Blood Reserve, outside Lethbridge, Alberta. The fossil is believed to be about 73 million years old. Write this number in standard form.



Math Link

Number Sense

A googol is a number represented by 1 followed by 100 zeros. The word *googol* was created in 1920 by an American mathematician, Edward Kasner, on the basis of his 9-year-old nephew's word for a very large number.



Attachments

Integer questions for practice Solutions.notebook

Ch 2 Lesson 2 WS 2.doc

Ch 2 Lesson 1 WS 1 Place values.doc