

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.



Warm up Grade 6

Date: Sept. 14



1) List the following integers from greatest to least (descending)

~~-10, -5, +3, -7, 0, +10~~
 +10, +3, 0, -5, -7, -10

● ⇒ +
 ○ ⇒ -

2) Use tiles to represent a) -5



b) +2



3) Write 81 023 006 in expanded form

$80\,000\,000 + 10\,000\,000 + 20\,000$

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

$3600 + 6$

65587211

4)
$$\begin{array}{r} 65\,487\,211 \\ + \quad 100\,000 \\ \hline 65\,587\,211 \end{array}$$

Homework Solutions

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1a) $20\,000\,000 + 4\,000\,000 + 300\,000 + 40\,000 + 2000 + 500 + 200$
 $\underline{24\,342\,584}$

b) 6 million 276 thousand 89
 $6\,276\,089$

c) two billion four hundred sixty million sixty-nine thousand eight
 $2\,460\,069\,008$

2) How many times great as 1000 is 1,000,000?
 $1\,000\,000 \div 1000 = 1000$

3) Write Expanded

a) $75\,308\,403$
 $70\,000\,000 + 5\,000\,000 + 300\,000 + 8000 + 400 + 3$

b) $64\,308\,470\,204$
 $60\,000\,000\,000 + 4\,000\,000\,000 + 300\,000\,000 + 8000\,000 + 400\,000 + 70\,000 + 200 + 4$

c) $99\,300\,327$
 $90\,000\,000 + 9\,000\,000 + 300\,000 + 300 + 20 + 7$

4) Value of Place underlined

a) $6\underline{2}7\,384$ b) $5\underline{4}\,286\,473$ c) $41\,\underline{9}62\,014$
 $20\,000$ $4\,000\,000$ $900\,000$

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
$$\begin{array}{r} 2183\ 486 \\ - 100\ 000 \\ \hline 2083\ 486 \end{array}$$

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
 millions thousands units

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

26 481 002 343 002
 billions millions Th un

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

(Show work or explain how you know)

$$\begin{array}{r} 2\,456\,872 \\ - \quad 10\,000 \\ \hline 2\,446\,872 \end{array}$$

b) Write the number that is one million more than 754 625 287

(Show work or explain how you know)

$$\begin{array}{r} 754\,625\,287 \\ + \quad 1\,000\,000 \\ \hline 755\,625\,287 \end{array}$$

Let's try together

#3) Write the following in expanded form

a) 8 985 600 021

$$8\ 000\ 000\ 000 + 9\ 00\ 000\ 000 + 80\ 000\ 000 + 5\ 000\ 000 + 600\ 000 + 20 + 1$$

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

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

Class/Homework

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7, ~~8~~, 11, 12

AND worksheet ????

~~Extra Practice 1 & 1b is still available~~

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.



Attachments

Integer questions for practice Solutions.notebook

Ch 2 Lesson 2 WS 2.doc

Ch 2 Lesson 1 WS 1 Place values.doc