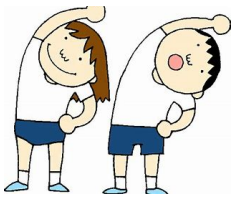
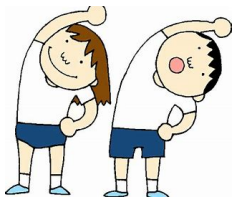


Warm up Grade 6

Date: Sept. 16



1) What place value are the underlined numbers?

not the value but the name

a) 45 678 903 b) 7890 c) 123 455

Ten millions hundreds ten thousands

2) Write the number that is 4 000 000 greater than 65 907 216 (Show work or explain how you know)

65 907 216
+ 4 000 000
69 907 216
=

3) Write the following in standard form

Two hundred sixty-two billion five hundred eight million two million three hundred forty-three thousands two

262 508 343 002

millions (mistake)

Homework Solutions

Page 48-49 AND worksheet ????
#~~5~~, 6, 7, 8, 11, 12

5) a) 10 000 more than 881 462 + 10 000 = 891 462 ← this is how I know

b) 100 000 less than 2 183 486 − 100 000 = 2 083 486

c) 1 000 000 more than 746 000 + 1 000 000 = 1 746 000

d) one million less than 624 327 207 − 1 000 000 = 623 327 207

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

Standard 1 321 851 888

Expanded

1 000 000 000 + 300 000 000 + 20 000 000 + 1 000 000

+ 800 000 + 50 000 + 1000 + 800 + 80 + 8

7, 8, 11, 12

7) 280 000 000

words

two hundred eighty million

8)

Trillions			Billions			Millions			Thousands			Units		
H	T	O	H	T	O	H	T	O	H	T	O	H	T	O

11) 73 million years old

73 000 000

12) least to greatest

22 577 000 , 22 766 000 , 27 190 000

Mumbai India , Dhaka Bangladesh , Tokyo Japan

Worksheet Solutions

esson 1: Exploring Large Numbers

1. Write each number in standard form.
   a) 2 million 186 thousand 23 — 2 186 0 23
   b) 4 000 000 000 + 6 000 000 + 900 000 + 60 000 + 5000 + 400 + 80 + 4 — 4 006 965 484
   c) 50 000 000 + 5 000 000 + 70 000 + 2000 + 9 — 55 072 009
   d) six billion two hundred seventeen million three thousand eleven — 6 217 003 011

2. Write each number in expanded form.
a) 184 267 317
b) 4 300 627 803
c) 17 652 425
d) 85 697 304 281

2a) 100 000 000 + 80 000000 + 4 000 000 + 200 000 + 60 000 + 7000+ 300 +10 + 7

2b) 4 000 000 000 + 300 000 000 + 600 000 + 20 000 +7000 +800 +3

2c) 10 000 000 +7 000 000 + 600 000 +50 000 +200 +400 +20 +5

2d) 80 000 000 000 + 5 000 000 000 + 600 000 000 + 90 000 000 + 7 000 000 + 300 000 + 4000 + 200 + 80 + 1

3. Write each number in words.
a) 1 856 374 021 356
b) 85 609 327 004
c) 2 000 351 246

3a) one trillion eight hundred fifty-six billion three hundred seventy-four million twenty-one thousands three hundred fifty six.

3b) eighty-five billion six hundred nine million three hundred twenty-seven four

3c) two billion three hundred fifty-one thousands two hundred forty-six

4. Write the value of each underlined digit.
a) 1<u>8</u>4 267 317
b) 4 300 <u>6</u>27 803
c) 1<u>7</u> 662 425
d) 5<u>5</u> 247 361 401

a) 80 000 000
b) 600 000
c) 7 000 000
d) 5 000 000 000

5. Use the digits from 1 to 8. Use each digit only once.
Make an 8-digit number as close to 17 000 000 as possible.

17 865 432

6. Explain the difference between the two 4s in the number 546 347 658 123.

40 000 000 000 other is 40 000 000

7. Write the number that is:

a) 10 000 less than 987 624 325

b) 100 000 more than 2 325 678 141

c) 1 000 000 more than 865 272 424 850

---

a) 987 624 325
- 10 000
9 8 7 614 325

b) 92 325 678 141
+ 100 000
92 325 778 141

c) 865 272 424 850
+ 1 000 000
865 273 424 850

Ch.2 (Lesson 2 Numbers all around)

Specific Outcomes

- Demonstrate an understanding of place value for numbers greater than one million. (6N1)
- Solve problems involving large numbers, using technology. (6N2)
- Demonstrate an understanding of factors and multiples by:
  - determining multiples and factors of numbers less than 100
  - identifying prime and composite numbers
  - solving problems involving multiples. (6N3)
- Explain and apply the order of operations, excluding exponents, with and without technology (limited to whole numbers). (6N9)

Today

Ch. 2 (Lesson 2: Numbers All Around)

Operations in math are add, subtract, multiply and divide.
They are used to solve math problems.

Saturday, August 23, 2003

Southern BC Fires Approach City

KELOWNA, BC – Police with bullhorns ordered a staggering 20,000 Kelowna residents to evacuate their homes as fast-moving wildfires moved closer. Thick smoke choked Kelowna's 100,000 residents and at times clouded the view of nearby Okanagan Lake.

The fire prompted the closure of Route 97, between Okanagan Falls and Penticton, and brought the total number of evacuees driven out by the fire to 30,000.

More than 3,000 firefighters from British Columbia and elsewhere in Canada are battling over 825 fires in the province.

Numbers are found in every day life.

Can you design a word problem involving either addition or subtraction, by using the information in the article?

Ex) If there is 100 000 residents in Kelowna, BC and 30 000 people evacuated the city, then how many remained behind?

(Subtraction ⇒ Big - Small)

$$\begin{array}{r} 100\ 000 \\ -\ 30\ 000 \\ \hline 70\ 000 \end{array}$$

70 000 people remain after Kelowna was evacuated.

When given questions with large numbers we can use estimations to give a reasonable answer. (NOT Exact)

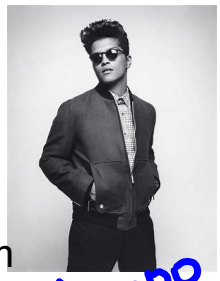
When given a word problem you must do the following:

*figure out the operation

* Estimate

*Do out the actual

* Then write an answer in sentence form



Example:

The population at a Bruce Springsteen concert, in 1992 was 68 952 people. The population of a Bruno Mars concert was 54 026, this past March. How many more people attended Springsteen's concert than Bruno's?

Subtract Big - Small

est 70 000

est 50 000

(YOU MUST SHOW YOUR WORK....but you can use a calculator)

STEP 1:

Estimate:

70 000
−50 000
20 000

STEP 2:

Actual:

68 952
−54 026
14 926

STEP 3:

Answer

14 926 more people attended Springsteen's concert than Bruno Mars'.

Another (BUT a Two-step Problem)

Below is the advertisment for a local concert.

Blackville's Most Talented

Location: Blackville Park Stage

Time: 7:00 pm to 10:00 pm

Cost: $12 per adult

$ 8 per student

Est 200 Est 300

a) If 162 adult tickets are sold and 286 student tickets are sold, then how much money did the show make? Explain how you know your answer is reasonable (This just means show your work and label as you go)

(YOU MUST SHOW YOUR WORK....but you can use a calculator)

STEP 1:

Estimate:

Adults 200 × 12 = $2400 + Students 300 × 8 = 2400 = $4800

STEP 2:

Actual:

Adults 162 × $12 = $1944 + Student 286 × $8 = $2288 = $4232

STEP 3:

Answer

They made $4232 at the concert.

Connect

The population of Canada was about 32 980 000 in July 2007.
Data show that there were about 497 cellular phones per 1000 people in that year.
How many cellular phones were there in Canada in 2007?

This is a 2-step problem.

➤ First, find how many groups of 1000 there are in 32 980 000.
To find how many equal groups, divide: $32\,980\,000 \div 1000 = 32\,980$

➤ There are about 497 cellular phones for one group of 1000.
To find how many cellular phones for 32 980 groups of 1000, multiply:
$32\,980 \times 497 = 16\,391\,060$

There were about 16 391 060 cellular phones in Canada in 2007.

Estimate to check the answer is reasonable.
Use benchmarks:
- 32 980 000 is closer to 30 000 000 than to 40 000 000.
  $30\,000\,000 \div 1000 = 30\,000$
- 497 is closer to 500 than to 400.
  $30\,000 \times 500 = 15\,000\,000$

16 391 060 is close to 15 000 000.
So, 16 391 060 is a reasonable answer.

Class/Homework

Page 52, 53, 54

#1, 2ab 3, 4,

Est. Act

No estimate

Show work
write a final sentence

only estimate and the actual BOTH for #1

then find the actual for the rest

4 western

BC, Alberta, Sask, Man

Adults → 300 est × $

Student

662 → 700 est × $ +

TIP

Practice

Use a calculator when you need to.

1. The ticket agent sold 357 adult tickets and 662 student tickets for a concert. How much money did the ticket agent take in? Explain how you know your answer is reasonable.

2. The table shows the populations of the western provinces and territories in 2006.
   a) Find the total population of the 4 western provinces.
   b) How many more people live in Saskatchewan than in Nunavut?
   c) Make up your own problem about these data. Solve it.

Provinces and Territories	Population
British Columbia	4 113 487
Alberta	3 290 350
Saskatchewan	968 157
Manitoba	1 148 401
Yukon Territory	30 372
Northwest Territories	41 464
Nunavut	29 474

3. The total population of Canada was 30 007 094 in 2001 and 31 612 897 in 2006. By how much did the population increase from 2001 to 2006?

4. Monarch butterflies migrate from Canada to Mexico every fall.
It is estimated that the butterfly travels about 82 km each day.
Suppose the butterfly travels from Edmonton to El Rosario.
This is a distance of about 3936 km.
How many days does it take?
How did you decide which operation to use?

5. The Fairview High School community of 1854 students and 58 teachers attended a special performance of a play at a local theatre.
The theatre has 49 rows, with 48 seats in each row.
   a) Were any seats empty? How do you know?
   b) If your answer to part a is yes, find the number of empty seats.

6. This table shows the number of participants at the 2002 and 2006 North American Indigenous Games.

Year	Athletes	Coaches, Managers, and Chaperones
2002 (Winnipeg)	6136	1233
2006 (Denver)	7415	1360

a) What was the total number of participants in 2002?
b) How many more athletes participated in 2006 than in 2002?
c) About how many times as many athletes participated in 2002 as coaches, managers, and chaperones?

How did you decide which operation to use each time?

Opening Ceremonies, 2002 North American Indigenous Games, Winnipeg

7. The food bank received 325 cases of 24 cans of soup, and 227 cases of 48 cans of soup. Estimate first. Then find how many cases of 12 cans of soup can be made.

8. Ms. Talby's hens laid 257 dozen eggs last month.
   a) About how many eggs is that?
      Explain your estimation strategy.
   b) Exactly how many eggs is that?
      How do you know your answer is reasonable?

9. The owner of a building renovated 18 apartments. Painting cost $5580 and new lights cost $3186.
   a) Which operation or operations will you use to find the cost for each apartment? Explain.
   b) Estimate this cost. Explain the strategy you used.
   c) Find the exact cost.

10. A newspaper prints 8762 papers, each with 16 pages.
A roll of newsprint can be used to print 6150 pages.
About how many rolls of newsprint are required?
Show your work.
How do you know your answer is reasonable?

11. The world's longest novel, *À la recherche du temps perdu* by Marcel Proust of France, contains about 9 609 000 letters.

a) Suppose each page contains about 2400 letters.
About how many pages does the novel contain?

b) Suppose it took Jacques 85 days to read the novel.
He read the same number of pages per day.
About how many pages did Jacques read each day?

How do you know your answers are reasonable?

Integer questions for practice Solutions.notebook