



Warm up Grade 6

Date: Nov. 13

1) a) List the following integers from least to greatest

~~-8~~, ~~+9~~, ~~0~~, ~~-15~~, ~~+7~~, ~~-1~~, ~~+2~~,

-15, -8, -1, 0, +2, +7, +9



b) Place <, > or = into the _____

i) $-9 < -2$
Big

ii) $0 < +6$

iii) $+3 > -7$

2) Write the following in written form 92 054 700 301

**ninety-two billion
thousand**

**fifty-four million
three hundred**

**seven hundred
one**

bill mill +ho hund

3) Determine if the following is equivalent.

a) $9 \times 4 - 6$

$36 - 6$
 30

$(7+5) \times 3 - 12 \div 2$

$12 \times 3 - 12 \div 2$

$36 - 12 \div 2$
 $36 - 6$

30

Equal

BADMAS

Lesson 1

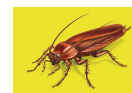
Decimals are all around us.



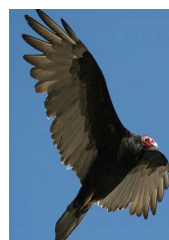
INDIAN
EDUCATION

Average mass of a human is 180.62 pounds

Smallest cockroach is the Ant Cockroach and is 0.139 mm



Greatest wingspan for a vulture was 2.83 m



Speed of light is 2.9979 m/s

Review from grade 5



-you described and represented decimals

(tenths, hundredths and thousandths) in standard form, expanded form, and written form. You also and compared decimals

Let's review

Label the place values that you know



<i>tens</i>	<i>ones</i>	Tenths	Hundredths	Thousandths	<i>Ten thousandths</i>	

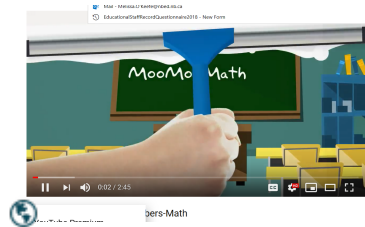
Can you read the following decimal?

2.54 ← This is in standard form



Two and fifty-four hundredths

↑ This is written form



Can you write the following decimal in expanded form?

2.54 Write the number followed by the place value with addition signs.



$$2 + 0.5 + 0.04$$

Explore



You will need a calculator and a copy of a place-value chart.
Write the headings and the number 27 in the chart, as shown below.

Tens	Ones	Tenths	Hundredths	Thousandths			
2	7	.					
		.					
		.					
		.					

- a) Divide 27 by 50.
Record it in the chart.
- b) Divide your answer to part a by 50.
Record it in the chart.
- c) Divide your answer to part b by 25.
Record it in the chart.

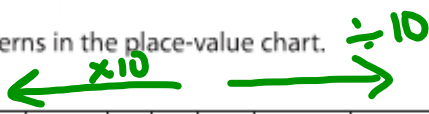
Use what you know about the headings in a place-value chart for whole numbers.
Write the missing headings in your place-value chart.



Connect

There are many patterns in the place-value chart.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths	Ten-Thousandths	Hundred-Thousandths	Millionths
100 000	10 000	1 000	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$	$\frac{1}{10\,000}$	$\frac{1}{100\,000}$	$\frac{1}{1\,000\,000}$



$1 = 10 \text{ tenths}$ $\frac{1}{100} = 10 \text{ thousandths}$ $\frac{1}{10\,000} = 10 \text{ hundred-thousandths}$



Notice as you move to the left, it's value is 10 time greater than the previous

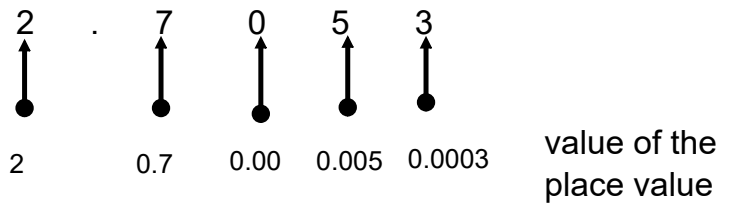


Notice as you move to the right, it's value is 10 time lesser than the previous

Study

Decimal Place Value Chart													
Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones	Decimal point	Tenths	Hundredths	Thousandths	Ten-thousandths	Hundred thousandths	Millionths

Image 1: Decimal Place Value chart.

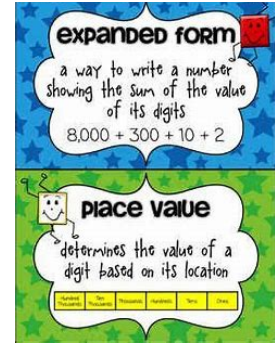


When we have decimals 76. 361 507



we leave spaces after each group of 3 digits

Written and Expanded Form



Example:
4. 371 864

Study

In expanded form (Use place value names with "+" sign or the value of the place value)

4 ones + 3 tenths + 7 hundredths + 1 thousandths +

8 ten-thousandths + 6 hundred-thousandths + 4 millionths

written with decimals

= 4 + 0.3 + 0.07 + 0.001 + 0.000 8 + 0. 000 06 + 0.000 004

Study

We read:

four and three hundred seventy-one thousandths, eight hundred sixty-four millionths

Small decimals are often used in science. For example:

A garden snail moves very slowly. In 1 h, it travels 0.0483 km. We read this number as: four hundred eighty-three ten-thousandths



Sound travels very fast. It would take 0.0046 min for sound to travel from one end of a football field to the other. We read this number as: forty-six ten-thousandths



You try

1) Write 5.384 512 in

a) written form using decimals

5 + 3 tenths + 8 hundredths + 4 thousandths + 5 ten-thousandths + 1 hundred-thousandths + 2 millionths
= 5 + 0.3 + 0.08 + 0.004 + 0.000 5 + 0.000 01 + 0.000 002

b) How would you read 5.384 512

→ Five and three hundred eighty-four thousandths five hundred twelve millionths

2) Write 6.308 24 in

a) written form using decimals

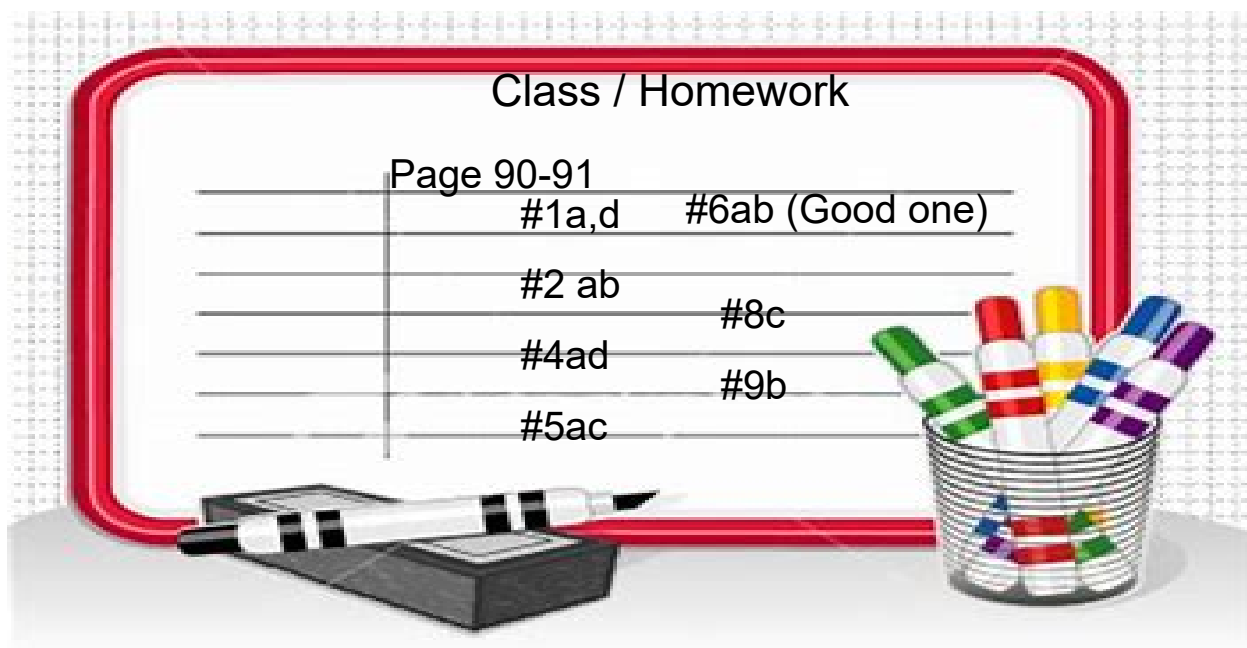
6 + 0.3 + 0.008 + 0.000 2 + 0.000 04

b) How would you read 6.308 24

→ Six and three hundred eight thousandths twenty-four hundred-thousandths

1 a b page 90

→ write the name of the #
written form
(word form)



Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths	Ten Thousandths	Hundred Thousandths	Millionths

2. Use the numbers in the table.
 Write the number that has a 5 in:
- a) the ten-thousandths position
 - b) the millionths position
 - c) the thousandths position
 - d) the hundred-thousandths position
 - e) the tenths position

0.635 734
0.506 312
1.003 825
3.702 456
2.184 592

3. Describe the meaning of each digit in 4.524 371.



5. Write each number in expanded form.

a) 0.0056

b) 0.00049

c) 3.000023

d) 0.348619

6. Write a decimal that is between:

a) 2.153 and 2.154

b) 0.6534 and 0.6535



7. Find two examples of very small numbers in the media. Write each number in a place-value chart. Explain how you use the patterns in the chart to read these numbers.

8. How are the values of the red digits in each number related?

a) 5.000 05

b) 2.1433

c) 0.677 56

d) 4.234 654

9. Write the number in each fact in as many different forms as you can.

- a) A strand of silk in the web of a garden spider has a diameter of about 0.000 003 m.
- b) The diameter of one red blood cell is about 0.000 762 cm.
- c) The mass of a grain of rice is about 0.000 02 kg.



10. Use any or all of these digits: 1, 0, 2, 0, 4, 0, 5, 0
- a) Write 5 numbers less than one thousandth.
 - b) Which of your numbers is the least? How do you know?
 - c) Which of your numbers is the greatest? How do you know?
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