

Place Values

7 1 9 , 0 4 8 , 6 3 2

| millions | | | thousands | | | ones | | |
|------------------|--------------|----------|-------------------|---------------|-----------|----------|------|------|
| hundred millions | ten millions | millions | hundred thousands | ten thousands | thousands | hundreds | tens | ones |

place value : *name of its location*

value: *number value*

Example:

23, 456, 817

| Digit | place value | value |
|-------|-------------------|------------|
| 6 | thousands | 6000 |
| 7 | ones | 7 |
| 4 | hundred thousands | 400,000 |
| 2 | ten millions | 20,000,000 |
| 8 | hundreds | 800 |

Decimals and Place Values

Decimals: represent a part of a whole

4.5 *fraction*

A decimal point in a number represents the word and when reading the decimal.

When reading a decimal use the last decimal place value to represent the whole decimal.

| | | | | | | |
|------|------|-----|--------|------------|-------------|-----------------|
| 7 | 2 | . | 5 | 9 | 8 | 3 |
| tens | ones | AND | tenths | hundredths | thousandths | ten thousandths |

Reading Decimals - Examples:

0.45

The last digit is in the hundredths place, therefore the number is read as:

forty - five hundredths

98.008

The last digit is in the thousandths place, therefore the number is read as:

Ninety - eight and eight thousandths

Writing Decimals

When writing decimals the word and tells us where to put the decimal point.

Remember the last digit of the decimal has to be in the place value that is read.

Examples:

- Twelve hundredths
- Write out the number 12
 - Make sure the 2 is in the hundredths place
- 0.12 *2 decimal places*

Five thousandths

0.005

Seventy-five and nine tenths

75.9

Twenty and four hundred forty-five thousandths

20.445

Fifty-six and thirty-four hundredths

56.34

Rounding:

- Decide which is the last digit to keep
- Increase this digit by 1 if the next digit is 5 or more
(This is called rounding up.)
- Leave this digit the same if the next digit is less than 5
(This is called rounding down.)
- When rounding a decimal, drop any zeros after the rounded digit

Examples: Round to the underlined digit.

1. $6.\underline{3}2$ 2. $\underline{2}45$ 3. $1.\underline{1}61$
 6.3 200 1.2
4. $6\underline{2}81$ 5. $17.3\underline{2}7$ 6. $151.3\underline{9}1$
 6300 17.33 151.39

7. Round $\underline{2}45$ to the tens place.

250

8. Round $234.\underline{6}849$ to the tenths place.

234.7

HOMEWORK

Worksheet - Place Values and Rounding