

TOPIC: INTRO TO DECIMALS

Introduction to Decimals

◆ Like fractions, **decimals** represent **part** of a **whole** $\frac{3}{10} = 0.3$



► And like whole numbers, decimals are written using the **place value system** which is based on powers of 10.

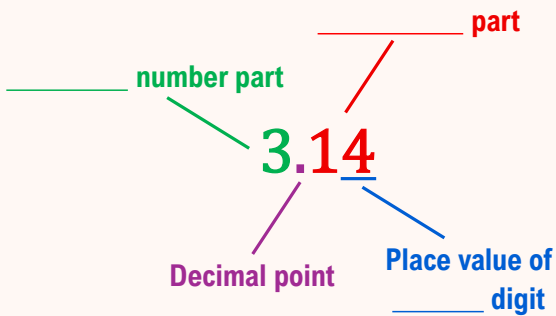
9 8 6 . 0 7 1

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
1000	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

◆ To express a decimal using words, break into parts based on the decimal point, which is read as "_____."

New

Decimals ↔ Words



three and fourteen-_____

(A) Write 12.032 in words.

(B) Write **twenty-four and ninety-six hundredths** as a decimal number (standard form).

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EXAMPLE

Name the digit that represents each place value in the number 827.31250.

Tens:

Thousandths:

Hundred-thousandths:

Hundreds:

Tenths:

Ten-thousandths:

Hundredths:

Ones:

PRACTICE

Write the decimal number below in words:

(A) 5.64

(B) 162.009

PRACTICE

Write the decimal in standard form.

(A) Two and four tenths

(B) Seven and eight hundredths

(C) Negative eight hundred five and six hundred twenty-five thousandths

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Writing Decimals As Fractions

◆ Recall: Fractions and decimals both represent part of a whole.

► We can write a decimal as a fraction with a denominator based on the _____ value.

New

Decimals → Fractions

0.25

1) Identify the numerator

- digits after the decimal

2) Identify **denominator**: 1_____

- # of decimal place values = number of 0's

3) Simplify **fraction**

◆ If there's a non-zero number in front of the decimal point, write it as a _____ # with the whole # in front.

EXAMPLE

Write each decimal as a fraction or mixed number and simplify your answer if necessary.

(A) 0.07

(B) 8.4

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PRACTICE

Write the decimal number below as a *fraction* or *mixed number* without simplifying.

(***A***) 0.48

(***B***) 12.306

(***C***) -0.086

(***D***) -4.027

PRACTICE

Write the decimal number below as a *fraction* or *mixed number* in its simplest form.

(***A***) 3.60

(***B***) -0.250

(***C***) -2.125