Grade 7 – NUMERACY – LESSON 3

Place Value Decimals

Decimals can also be written and read in standard form or expanded form.

Expanded Form

In expanded form the number is broken down into its place value with zeros only then added to each subsequent place value.

When you write the *decimal numbers* you add a zero and a decimal point **before** the decimal digit.

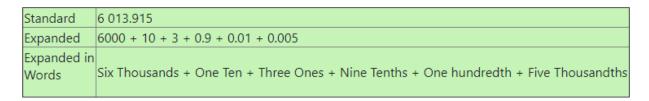So if you're writing 1.4 in expanded form you would write: 1 + **0.**4

Video: Decimal Numbers to Thousandths – Standard and Expanded Form

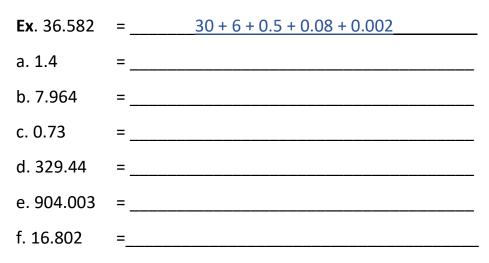| Standard	12 746.89
Expanded	10 000 + 2000 + 700 + 40 + 6 + 0.8 + 0.09
Expanded in Words	One ten thousand + Two Thousands + Seven Hundreds + Forty Tens + Six Ones + Eight Tenths + Nine hundredths

Expanded Form to Standard Form

Changing numbers from expanded form to standard form can be tricky. In expanded form, numbers with zero as placeholders are not shown. Take a look to see how to convert numbers from expanded form to standard form in this video.

Here is an example again. Notice that there are zero hundreds. The expanded form "skips" from thousands to tens - the zero hundreds is not included.

Standard	6 013.915
Expanded	6000 + 10 + 3 + 0.9 + 0.01 + 0.005
Expanded in Words	Six Thousands + One Ten + Three Ones + Nine Tenths + One hundredth + Five Thousandths

1. Write the following numbers in expanded form. *Reminder: Start with the biggest number.*

Ex. 36.582   =   _____30 + 6 + 0.5 + 0.08 + 0.002_____

a. 1.4   = _____

b. 7.964   = _____

c. 0.73   = _____

d. 329.44   = _____

e. 904.003   = _____

f. 16.802   =_____

2. Write the following numbers in standard form. *Reminder: You may have to add a 0 as a place holder in some cases.*

Ex. 6 + 0.04 + 0.001   = _____6.041_____

a. 3 + 0.2 + 0.07 + 0.009 = _____

b. 0.2 + 0.01 + 0.003   = _____

c. 50 + 8 + 0.09 + 0.006   = _____

d. 70 + 0.1 + 0.04 + 0.009 = _____

e. 800 + 0.9 + 0.006   = _____