

Grade 8 Unpacked Math Standards – Number Sense

8.N.1.1. Students are able to **represent** numbers in a variety of forms and **identify** the subsets of rational numbers.

Webb level: 1

Bloom: Comprehension

Verbs Defined:

Represent: write/graph

Identify: recognize

Key Terms Defined:

Variety of forms: exponents, scientific notation, absolute value, radicals involving perfect squares, graph of a number

Subsets of rational numbers: set of natural numbers, set of whole numbers, set of integers

Teacher Speak

Students are able to represent (write) numbers in a variety of forms and identify (recognize) the subsets of rational numbers.

Student Speak

I can:

*write (represent) numbers in different forms:

exponential

scientific notation

absolute value

radicals involving perfect squares

*graph (represent) numbers on a number line

*recognize (identify) the numbers within the sets of natural numbers, whole numbers, and integers (subsets of rational numbers)

8.N.2.1. Students are able to read, write, and **compute** within any subset of rational numbers.

Webb level: 1/2

Bloom: Application

Verbs Defined:

Compute: calculate

Key Terms Defined:

rational numbers: natural numbers, whole numbers, integers, fractions, decimals, percents (any number written as a fraction, $\frac{a}{b}$, $b \neq 0$)

Teacher Speak:

Students are able to read, write and compute (calculate) within any subset of rational numbers.

Student Speak:

I can:

- *read natural numbers, whole numbers, integers, fractions, decimals and percents
- *write natural numbers, whole numbers, integers, fractions, decimals, and percents
- *compare within the subsets of rational numbers
- *calculate (compute) problems involving rational numbers
 - negative and positive fractions
 - negative and positive decimals
 - integers
- * solve problems involving
 - discount
 - commission
 - percent of profit
 - mark-up
 - simple interest
 - percent increase
 - percent decrease

8.N.3.1. Students are able to **use** various strategies to **solve** multi-step problems involving rational numbers.

Webb level: 2

Bloom: Application

Verbs Defined:

Use: apply

Solve: find the solution to

Key Terms Defined:

Strategies: methods

- estimation,
- guess and check,
- make a table or organized list,
- work a simpler problem,

- look for a pattern,

Multi-step problems: problems involving at least two steps

Rational numbers: any number that can be expressed as ratio of two integers; the denominator cannot be zero

Teacher Speak:

Students are able to use (apply) various strategies to solve (find the solution to) multi-step problems involving rational numbers.

Student Speak:

I can:

*apply (use) estimation, guess and check, make a table or organized list, work a simpler problem, look for a pattern, (strategies) to find the solution for problems that involve at least two steps (multi-step problems) involving rational numbers.

Working Document