

Public Schools of the Tarrytowns

Grade 6 Math Curriculum

First Trimester

September

Order of Operations

Week 1, 4 Weeks

Essential Questions:

Why is the order of operations essential in getting the correct answer to an expression?

How can I use my prior knowledge in math to help me solve a variety of word problems?

Skills:

Use the four-step plan to solve word problems.

Evaluate numerical expressions using order of operations (may include exponents of two and three).

Estimate sums, differences, products, and quotients.

Problem solving strategies.

Powers and Exponents.

Algebraic Expressions.

Identify a monomial as an algebraic expression containing one term.

Square roots.

Decimals

Essential Questions:

What decisions and steps do I take to compare and order fractions and decimals?

How can large numbers in standard written form be represented in scientific notation and vice-versa?

Skills:

Compare and order decimals.
Round decimals.
Add, subtract, and multiply decimals.
Multiply decimals mentally with powers of ten.
Operations with decimals.
Applications with decimals.
Powers of ten.
Scientific notation.
The metric system.
Verbal problems.
Divide decimals.
Solve verbal problems.

Statistics

Essential Questions:

Can you find the mean, median, mode and range of a set of data?
How does a change in the data affect the measures of central tendency?
Given the mean, how could you find a missing piece of data?

Skills:

Solve problems by organizing data in a table
Find mean, median, and mode of a set of data
Use mean, median, and mode to make predictions
Justify predictions made from data
Determine the range for a given set of data

Evaluate Algebraic Expressions

Essential Questions:

Given values of variables, can I evaluate algebraic expressions?
Can I identify a variable in a word problem?

Skills:

Define components of an algebraic expression and algebraic equation.
Recognize the difference between an algebraic expression and equation.
Use substitution to evaluate algebraic expressions (may include exponents of one, two, and three).

October

Divisibility Rules

Week 5, 5 Weeks

Essential Questions:

How can I determine if numbers are divisible by 2, 3, 5, 6, 9 or 10?

Skills:

Find and extend number patterns.
Apply divisibility rules.

Prime Factorization

Essential Questions:

Can I identify all prime numbers between 1 and 100?
Do I know how to make factor trees and find the prime factorizations of a set of numbers?

Skills:

Recognize the difference between prime and composite numbers.
Find the prime factorization of a number and express it in exponential notation.
Construct factor trees.

Converting Fractions and Decimals

Essential Questions:

How can I compare/order decimals and fractions and place them on a number line?

Skills:

Find the Greatest Common Factor.
Simplify fractions.
Convert between fractions and decimals.
Order rational numbers on a number line.

Operations with Fractions

Essential Questions:

How do I know when I read a word problem with whole numbers, mixed numbers, and fractions, whether I multiply or divide?

Skills:

Mixed numerals and improper fractions.

Add and subtract fractions.

Applications with fractions.

Multiply fractions.

Divide fractions.

November

Percents, Fractions, and Decimals

Week 10, 4 Weeks

Essential Questions:

How do I convert among fractions, decimals, and percents?

What are the relationships among ratios, proportions, and percents?

Skills:

Convert between percents, decimals, and fractions.

Define percents.

Solve problems using the percent proportion.

Find percent change.

Calculate discount and sales tax.

Calculate simple interest.

