

# Grade 8 Study Guide Math Mid-Year Exam

**Date:** Sunday, December 10<sup>th</sup>, 2023.

**Time:** 8:00 to 9:30.

**Duration:** 1 hour and 30 minutes.

**Study from:** Math Reveal Textbook, Math notebook, IXL, Aleks.

Lesson	Topic	Pages
2-2	Roots	79-90
2-4	Estimate Irrational Numbers	101-110
1-1	Power and Exponents	3-12
1-2	Multiply and Divide Monomials	13-24
1-3	Powers of Monomials	25-32
1-4	Zero and Negative Exponents	33-42
1-5	Scientific Notation	43-54
3-1	Solve Equations with Variables on Each Side	129-136
3-2	Write and Solve Equations with Variables on Each Side	137-144
<b>Types of Questions to expect:</b> <b>Multiple choice, calculations, and word problems.</b>		

**Keywords:** (To be understood, not memorized)

<b>Product:</b> The answer to a multiplication problem.
<b>Quotient:</b> The answer to a division problem.
<b>Sum:</b> The answer to an addition problem.
<b>Difference:</b> The answer to a subtraction problem.
<b>Exponent:</b> Refers to how many times a number (base) must be multiplied by itself.
<b>Square Root:</b> The square root of a number produces the original number when multiplied by itself.
<b>Irrational Numbers:</b> A real number which cannot be expressed as a ratio of integers.
<b>Rational Number:</b> A number which can be expressed as a fraction.

**Monomials:**

A mathematical expression consisting of one term.

**Linear Equations:**

An equation with a graph that is a straight line.

**Variable:**

A symbol, usually a letter, used to represent a number in mathematical expressions or sentences.

**Negative Exponent:**

The result of repeated division used to represent very small numbers.

**Zero Exponent Rule:**

A rule that states that any nonzero number to the zero power is equivalent to 1.

**Scientific Notation:**

A compact way of writing numbers that are very large or very small.

**Kindly note that calculators are NOT allowed to be used and smart watches should NOT be worn during an exam.**