All INCOMING EIGHTH GRADERS - Summer 2021 IXL Math Requirements

This is a list of recommended sections to work on for your summer IXL hours. These are the sections that are most relevant to what you should review to be ready for 8th grade.

You do not need to do every section. Look at the IXL learning page and check the preview of these sections. Pick the ones that you feel you would benefit the most from in preparation for next year. Work on sections that you struggled with in 6th grade to give you more practice and hopefully increase your understanding and proficiency in those areas.

Do not spend time doing sections you already know well. You may work on a section you have already done. Pick a variety of sections to do, and try to do 2 or 3 lessons from each section.

5 hours, required by the 1ˢᵗ day of school, from the following topics:

IXL Grade Level: 7

A. Number theory

- Prime or composite
- Prime factorization
- Multiplicative inverses
- Divisibility rules
- Greatest common factor
- Least common multiple

B. Integers

- Understanding integers
- Integers on number lines
- Graph integers on horizontal and vertical number lines
- Absolute value and opposite integers
- •New! Quantities that combine to zero: word problems
- Compare and order integers
- Integer inequalities with absolute values

C. Operations with integers

- Integer addition rules
- Add integers using counters
- •New! Add integers using number lines
- Add integers
- Integer subtraction rules
- Subtract integers using counters
- •New! Subtract integers using number lines
- Subtract integers
- Integer addition and subtraction rules
- Add and subtract integers using counters

- [Add and subtract integers](#)
- [Integer multiplication rules](#)
- [Multiply integers](#)
- [Integer division rules](#)
- •New! [Equal quotients of integers](#)
- [Divide integers](#)
- [Integer multiplication and division rules](#)
- [Multiply and divide integers](#)

E. Operations with decimals

- [Add and subtract decimals](#)
- [Add and subtract decimals: word problems](#)
- [Multiply decimals](#)
- [Multiply decimals and whole numbers: word problems](#)
- [Divide decimals](#)
- [Divide decimals by whole numbers: word problems](#)

F. Fractions and mixed numbers

- [Understanding fractions: word problems](#)
- [Equivalent fractions](#)
- [Write fractions in lowest terms](#)

G. Operations with fractions

- [Add and subtract fractions](#)
- [Add and subtract fractions: word problems](#)
- [Add and subtract mixed numbers](#)
- [Add and subtract mixed numbers: word problems](#)

I. Exponents and square roots

- [Understanding exponents](#)
- [Evaluate exponents](#)
- [Solve equations with variable exponents](#)
- [Exponents with negative bases](#)
- [Square roots of perfect squares](#)

J. Ratios, rates, and proportions

- [Understanding ratios](#)
- [Identify equivalent ratios](#)
- [Write an equivalent ratio](#)
- [Equivalent ratios: word problems](#)
- [Unit rates](#)

R. Expressions and properties

- [Write variable expressions: one operation](#)
- [Write variable expressions: two or three operations](#)
- [Write variable expressions: word problems](#)

IXL Grade Level: 7

J. Ratios, rates, and proportions

- [Compare ratios: word problems](#)
- [Do the ratios form a proportion?](#)
- [Do the ratios form a proportion: word problems](#)
- [Solve proportions](#)
- [Solve proportions: word problems](#)

L. Percents

- [What percentage is illustrated?](#)
- [Convert between percents, fractions, and decimals](#)
- [Compare percents to fractions and decimals](#)
- [Estimate percents of numbers](#)
- [Percents of numbers and money amounts](#)
- [Percents of numbers: word problems](#)
- [Solve percent equations](#)
- [Solve percent equations: word problems](#)
- [Percent of change](#)
- [Percent of change: word problems](#)
- [Percent of change: find the original amount word problems](#)

R. Expressions and properties

- [Write variable expressions: one operation](#)
- [Write variable expressions: two or three operations](#)
- [Write variable expressions: word problems](#)
- [Evaluate linear expressions](#)
- [Evaluate multi-variable expressions](#)
- [Evaluate absolute value expressions](#)
- [Evaluate nonlinear expressions](#)
- [Identify terms and coefficients](#)

- [Sort factors of variable expressions](#)
- [Properties of addition and multiplication](#)
- [Multiply using the distributive property](#)
- [Solve equations using properties](#)
- [Write equivalent expressions using properties](#)
- [Add and subtract linear expressions](#)
- [Add and subtract like terms: with exponents](#)
- [Factors of linear expressions](#)
- •New! [Identify equivalent linear expressions using algebra tiles](#)
- [Identify equivalent linear expressions I](#)
- [Identify equivalent linear expressions II](#)
- [Identify equivalent linear expressions: word problems](#)

S. One-variable equations

- [Which x satisfies an equation?](#)
- [Write an equation from words](#)
- [Model and solve equations using algebra tiles](#)
- [Write and solve equations that represent diagrams](#)
- [Solve one-step equations](#)
- [Solve two-step equations](#)
- [Solve equations: word problems](#)
- [Solve equations involving like terms](#)
- [Solve equations: complete the solution](#)

U. Two-variable equations

1. [Does (x, y) satisfy the equation?](#)
2. [Identify independent and dependent variables](#)
3. [Find a value using two-variable equations](#)
4. [Solve word problems involving two-variable equations](#)
5. [Complete a table for a two-variable relationship](#)
6. [Write a two-variable equation](#)
7. [Identify the graph of an equation](#)
8. [Graph a two-variable equation](#)
9. [Interpret a graph: word problems](#)
10. [Write an equation from a graph using a table](#)