

# 7<sup>th</sup> Grade Summer iXL Skills

## Week 1 and 2 - Exponents and square roots

- I.1 Understanding exponents
- I.2 Evaluate exponents
- I.3 Solve equations with variable exponents
- I.4 Exponents with negative bases
- I.5 Exponents with decimal and fractional bases
- I.6 Understanding negative exponents
- I.7 Evaluate negative exponents
- I.8 Evaluate numerical expressions involving exponents
- I.9 Square roots of perfect squares
- I.10 Estimate square roots

## Week 3 and 4 - Ratios and proportions

- J.1 Understanding ratios
- J.2 Equivalent ratios
- J.3 Equivalent ratios: word problems
- J.4 Compare ratios: word problems
- J.5 Unit rates
- J.6 Do the ratios form a proportion?
- J.7 Do the ratios form a proportion: word problems
- J.8 Solve proportions
- J.9 Solve proportions: word problems

## Week 5 - Proportional relationships

- K.1 Find the constant of proportionality from a table
- K.2 Identify graphs of proportional relationships
- K.3 Find the constant of proportionality from a graph
- K.4 Write equations for proportional relationships
- K.5 Graph proportional relationships

## Week 6 - One-variable equations

- T.2 Write an equation from words
- T.5 Solve one-step equations
- T.6 Solve two-step equations
- T.7 Solve equations: word problems
- T.8 Solve equations involving like terms

## **Week 7 - Two-variable equations**

- V.1** Does  $(x, y)$  satisfy the equation?
- V.2** Identify independent and dependent variables
- V.3** Find a value using two-variable equations
- V.4** Solve word problems involving two-variable equations
- V.5** Complete a table for a two-variable relationship

## **Week 8 - Linear functions**

- W.1** Find the slope from a graph
- W.2** Find the slope from two points
- W.3** Find a missing coordinate using slope
- W.4** Find the slope from an equation
- W.5** Graph a line using slope
- W.6** Write a linear function

## **Week 9 and 10 - Transformations**

- Y.1** Identify reflections, rotations, and translations
- Y.2** Translations: graph the image
- Y.3** Translations: find the coordinates
- Y.4** Reflections: graph the image
- Y.5** Reflections: find the coordinates
- Y.6** Rotations: graph the image
- Y.7** Rotations: find the coordinates
- Y.8** Symmetry