



# Seventh Grade Math Review, Master, and Extend

Dear Parents,

Summer presents a great opportunity to continue learning from home. Students can review standards learned in Seventh Grade, ensure mastery of key standards, and preview standards for Eighth Grade.

## Concepts for students to review from Seventh Grade:

As each student may need specific standards for review and mastery, please use Georgia Virtual Learning for this need. Click [here](#) to be taken directly to the MS Math 7<sup>th</sup> Grade modules. Click on the “View” for the areas you feel your child might need additional review and practice within the website.

### MS Math 7th Grade

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**Concepts students may preview for 8<sup>th</sup> Grade** (link will take you to the MS 8<sup>th</sup> Grade Georgia Virtual Learning modules):

- Solve linear equations in one variable. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form  $x = a$ ,  $a = a$ , or  $a = b$  results (where  $a$  and  $b$  are different numbers).
- Use numbers expressed in scientific notation to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as  $3 \times 10^8$  and the population of the world as  $7 \times 10^9$ , and determine that the world population is more than 20 times larger.

- Add, subtract, multiply and divide numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Understand scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g. use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology (e.g. calculators).

**Vocabulary:** Have students define the following phrases and talk about what each means to them in terms of solving math problems. Just knowing the definition is not as meaningful as understanding how and why we use these terms to help solve equations.

### Addition Property of Equality

### Additive Inverses

### Algebraic Expression

### Inverse Operation

### Linear Equation in One Variable

### Multiplication Property of Equality

### Multiplicative Inverses

### Exponential Notation

### Scientific Notation

### Significant Digits

## Practice Problem 1

Simplify. Write your answer in scientific notation.

$$\frac{8.4 \times 10^{-1}}{2.1 \times 10^1}$$

**Solution:**  $4 \times 10^{-2}$

## Practice Problem 2

The following equation was solved incorrectly. Identify the mistake, show the correct work, and determine whether the equation has one solution, no solution, or infinite/many solutions.

$$5(x + 3) = 5x + 3$$

$$5x + 3 = 5x + 3$$

$$\begin{array}{r} -5x \quad -5x \\ 5x + 3 = 5x + 3 \\ \hline 3 = 3 \end{array}$$

$$3 = 3$$

Infinite/many solutions

**Solution:** They forgot to distribute the 5 to all parts of the term  $(x + 3)$ .

$$5(x + 3) = 5x + 3$$

$$5x + 15 = 5x + 3$$

$$\begin{array}{r} -5x \quad -5x \\ \hline \end{array}$$

$$15 = 3$$

No solution

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## Practice Problem 3

) UPS charges \$7 for the first pound, and \$0.20 for each additional pound. FedEx charges \$5 for the first pound and \$0.30 for each additional pound. How many pounds,  $p$ , will it take for UPS and FedEx to cost the same?

**Solution:**  $p = 20$  (20 pounds)

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## Internet Resources

**Textbook Online:** [connected.mcgraw-hill.com](http://connected.mcgraw-hill.com)

Textbook Publisher	Print and/or consumable	Online Access
My Math McGraw-Hill 2013	Consumable Workbook	<a href="http://connected.mcgraw-hill.com/connected/login.do">http://connected.mcgraw-hill.com/connected/login.do</a>  <b>Student User ID:</b> ccsd(student ID) <b>Password:</b> cobbmath1

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## Learning Links to build background knowledge and to preview 8<sup>th</sup> Grade:

Skill & Concept	Website	Link

<p><b>Early Math</b></p>	 <p>Getting started is simple: Click Start Mission, Create a New Account, sign up using either gmail, facebook or email address. Enter your name and birthdate, follow the link that is sent to your account, and finish by signing up with a username and password.</p>	<p><a href="https://www.khanacademy.org/math/early-math">https://www.khanacademy.org/math/early-math</a></p>
<p><b>Computing quotients using the fractions division rule</b></p>		<p><a href="https://learnzillion.com/lesson_plans/7615-computing-quotients-using-the-fractions-division-rule">https://learnzillion.com/lesson_plans/7615-computing-quotients-using-the-fractions-division-rule</a></p>
<p><b>Perform operations with decimals using the standard algorithm (6.NS.B.3)</b></p>		<p><a href="https://learnzillion.com/resources/72552-perform-operations-with-decimals-using-the-standard-algorithm-6-ns-b-3">https://learnzillion.com/resources/72552-perform-operations-with-decimals-using-the-standard-algorithm-6-ns-b-3</a></p>
<p><b>7<sup>th</sup> Grade Online Math Games</b></p>		<p><a href="http://www.adaptedmind.com/gradelist.php?grade=7">www.adaptedmind.com/gradelist.php?grade=7</a></p>



