



# **Board of Education Educational Work Session**

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# Enrollment since offering middle school courses on Self-Select Basis:

	<b>12-13</b>	<b>13-14</b>	<b>14-15</b>	<b>15-16</b>	<b>16-17</b>	<b>17-18</b>
<b>Pre-Algebra 7 (H)</b>	61 (100%)	53 (98%)	51 (100%)	47 (100%)		
<b>Math 7 Accelerated</b>					65 (94%)	87 (% TBD)
<b>Algebra 1</b>	39 (100%)	34 (100%)	27 (100%)	28 (100%)		
<b>Algebra 1</b>					52 (100%)	54 (% TBD)
<b>Earth Science</b>	43 (100%)	50 (100%)	54 (100%)	48 (100%)		
<b>Earth Science</b>					97 (100%)	88 (% TBD)
	<b>12-13</b>	<b>13-14</b>	<b>14-15</b>	<b>15-16</b>	<b>16-17</b>	<b>17-18</b>

# Level Changes in Pre-Algebra and Algebra

2015 - 16 Math 7 (H)	
# started	# level changes
50	3

2016 - 17 Math 7 (Self-Select)	
# started	# level changes
78	13

2017 - 18 Math 7 (Self-Select)	
# started	# level changes
87	TBD

2015 - 16 Algebra 1	
# started	# level changes
38	9

2016-17 Algebra 1	
# started	# level changes
57	4

2017-18 Algebra 1	
# started	# level changes
54	TBD

# Algebra Regents Results

<b>2015 - 16</b>		
<b>Algebra 1 Regents Results</b>		
<b>Passing</b>	29/29	100%
<b>Mastery</b>	27/29	93%

<b>2016 - 17</b>		
<b>Algebra 1 Regents Results</b>		
<b>Passing</b>	53/53	100%
<b>Mastery</b>	33/53	62%

# Work from Math Alignment Committee

**Math Alignment Committee - suggestions for changes in curriculum**

## **Moved to Grade 3 (from Grade 4)**

Introduce addition and subtraction of fractions as joining and separating parts referring to the same whole

Explain why a fraction  $a/b$  is equivalent to a fraction  $(a \times n)/(b \times n)$  by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

Use place value understanding to round multi-digit whole numbers to any place

Read and write multi-digit whole numbers using base- ten numerals, number names, and expanded form

Generate a number or shape pattern that follows a given rule

Find all factor pairs for a whole number in the range 1-100

Interpret a multiplication equation as a comparison

## Moved to Grade 4 (from Grade 5)

Interpret multiplication as scaling

Interpret the product  $(a/b) \times q$  as a parts of a partition of  $q$  into  $b$  equal parts; equivalently, as the result of a sequence of operations  $a \times q \div b$

Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction

Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers

Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division

Fluently multiply multi-digit whole numbers using the standard algorithm

Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $1/10$  of what it represents in the place to its left.

## Moved to Grade 5 (from Grade 6)

Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions

Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities

Know that a percent of a quantity is a rate per 100

Solve unit rate problems including those involving unit pricing and constant speed

Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane

Understand the concept of a unit rate and use rate language in the context of a ratio relationship

Understand the concept of a ratio and use ratio language to describe a relationship between two quantities

## Moved to Grade 6 (from Grade 7)

Apply properties of operations as strategies to add and subtract rational numbers

Understand subtraction of rational numbers as adding the additive inverse

Understand " $p+q$ " as the number location a distance of absolute value of " $q$ " from " $p$ " in either the positive or negative direction depending on the sign of  $q$

Describe situations in which opposite quantities combine to make 0

Solve linear equations in one variable

## Moved to Grade 7 (from Grade 8)

Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept

Explore and use the formulas for the volume of cones, cylinders, and spheres and use them to solve simple real-world and mathematical problems with limited complexity

Describe qualitatively the functional relationship between two quantities by analyzing a graph

Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two  $(x, y)$  values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

Interpret the equation  $y = mx + b$  as defining a linear function, whose graph is a straight line; give examples of functions that are not linear

Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and combining like terms

Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions

Solve linear equations in one variable

Derive the equation  $y = mx$  for a line through the origin and the equation  $y = mx + b$  for a line intercepting the vertical axis at  $b$

Graph proportional relationships, interpreting the unit rate as the slope of the graph

## Moved to Grade 7 Accelerated (from Grade 8)

Factoring - GCF, DOTS, Trinomial (leading coefficient of 1) Introduce Graphing Calculator to use "Y=", "table", "Tableset", "window"

Interpret the equation  $y = mx + b$  as defining a linear function, whose graph is a straight line; give examples of functions that are not linear

Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and combining like terms

Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions

Derive the equation  $y = mx$  for a line through the origin and the equation  $y = mx + b$  for a line intercepting the vertical axis at  $b$

Graph proportional relationships, interpreting the unit rate as the slope of the graph

Thank you for your attention

