

Secondary Math Standards Quizzes

The grade 6-Algebra II math quizzes are prepared for a full-year with 7 quizzes per quarter for a total of 28. Each quiz is to be copied front and back with the first 5 questions from prior grade levels and the other 5 from the current course.

The downloaded quizzes cost \$10 per teacher. In addition to the quizzes, the blank graphs, key concept lists and answer sheets are included.

6th Grade Student Concept Checklist

Name: _____ Teacher: _____ Hour: _____

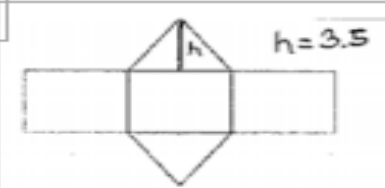
Place + or - adjacent to Essential Concept number. Write + for correct answer on LtoJ Quiz and - for incorrect answer on quiz.

						Essential Concept
						1. Fluently divide multi-digit numbers using the standard algorithm.
						2. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm.
						3. Find the GCF of two whole numbers less than or equal to 100 and LCM of two whole numbers less than or equal to 12.
						4. Identify Prime Numbers up to 100 and find the prime factorization of numbers up to 100.
						5. Use the distributive property to express a sum of two whole numbers 1-100. Ex. $36 + 8 = 4(9 + 2)$ and $3(4 + 5) = 12 + 15 = 27$
						6. Understand a rational number (any # that can be expressed as a fraction of 2 integers where the denominator is not = 0) as a point on the number line.
						7. Understand the absolute value of a rational number as its distance from 0 on the number line.



Name _____ **Grade 6**

Week 1

	<i>Pictorial Representation</i>	<i>Solutions</i>				
<p>Grade 4: (4) Add and subtract</p> <table border="1"><tr><td>567</td><td>1527</td></tr><tr><td>+ 645</td><td>- 748</td></tr></table>	567	1527	+ 645	- 748		
567	1527					
+ 645	- 748					
<p>Grade 5: (17) How many $\frac{1}{3}$ cup servings are in 2 cups of raisins?</p>						
<p>Grade 5: (7) Solve:</p> <table border="1"><tr><td>32</td><td>3512</td></tr></table>	32	3512				
32	3512					
<p>Number: (11) Jay has \$20 in his wallet and owes his mother \$24. What is the difference between the two amounts?</p>						
<p>Geometry: (35)</p>		<p>Find the surface area of the triangular prism. The sides of the square are 4cm.</p>				

Algebra: (19)	Pictorial Representation	Solutions																									
Evaluate x^3 given $x = 6$.																											
Number: (4) Identify the first 10 prime numbers.																											
Ratio/Proportions: (30) If it takes 6 hours to build 8 bird houses, how long would it take to build 12 bird house?																											
Statistics/Probability: (39) The following are the number correct for a class LtoJ quiz. Draw a histogram to represent the data.	<p style="text-align: center;"># correct</p> <table style="margin-left: auto; margin-right: auto;"> <tbody> <tr><td>0</td><td>6 II</td></tr> <tr><td>1</td><td>7 II</td></tr> <tr><td>2 II</td><td>8</td></tr> <tr><td>3 IIII</td><td>9 I</td></tr> <tr><td>4 IIII</td><td>10</td></tr> <tr><td>5 III</td><td></td></tr> </tbody> </table>	0	6 II	1	7 II	2 II	8	3 IIII	9 I	4 IIII	10	5 III															
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1	7 II																										
2 II	8																										
3 IIII	9 I																										
4 IIII	10																										
5 III																											
Algebra: (24) Given the equation $y = 3x$, circle the table of values that represents the graph.	<table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr><th>X</th><th>Y</th></tr> </thead> <tbody> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>3</td></tr> <tr><td>-1</td><td>2</td></tr> </tbody> </table>	X	Y	0	0	1	3	-1	2	<table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr><th>X</th><th>Y</th></tr> </thead> <tbody> <tr><td>1</td><td>3</td></tr> <tr><td>3</td><td>9</td></tr> <tr><td>5</td><td>15</td></tr> </tbody> </table>	X	Y	1	3	3	9	5	15	<table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr><th>X</th><th>Y</th></tr> </thead> <tbody> <tr><td>3</td><td>1</td></tr> <tr><td>9</td><td>3</td></tr> <tr><td>15</td><td>5</td></tr> </tbody> </table>	X	Y	3	1	9	3	15	5
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Name _____

Grade 7

Week 2

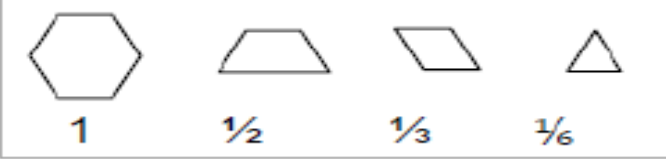

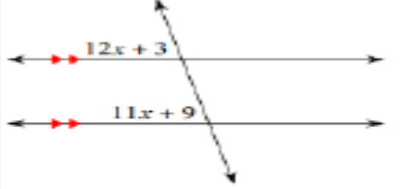
Grade 4: (29)	Pictorial Representation	Solutions													
Find the area and perimeter of a square with side length 6ft.															
Grade 5: (8) Add: $.042 + .125 + 2.08 =$															
Grade 6: (5) Use the distributive property to express the sum. $55 + 33$															
Grade 6: (20) Simplify the expression.	$2a + 14a + 25 + 2(3 + a)$														
Grade 7:(10) Are the values in the table proportional?	<table border="1"><tbody><tr><td># Vegetable plants</td><td>4</td><td>6</td><td>8</td><td>10</td></tr><tr><td># flowers</td><td>6</td><td>9</td><td>12</td><td>15</td></tr></tbody></table>	# Vegetable plants	4	6	8	10	# flowers	6	9	12	15				
# Vegetable plants		4	6	8	10										
# flowers	6	9	12	15											

Grade 7:(22)	Pictorial Representation	Solutions
Solve for a: $2a + 4 < 16$		
Grade 7:(7) Give an example to represent the associative property of multiplication.		
Grade 7: 39) Jay surveyed the 30 oldest members of the club. Is this a random sample of the club?		
Grade 7:(32)  <p data-bbox="624 821 1133 906">Circle the cross section of the 3 d Figure.</p>		
Grade 7:(18) Factor each expression: a. $3x + 9$ b. $12y - 4$		



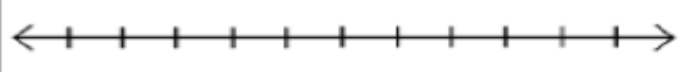
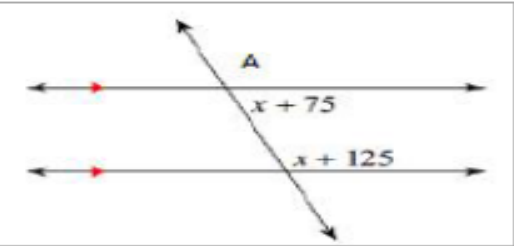
Name _____ **Grade 8**

Week 3

Grade 4: (11)	Pictorial Representation	Solutions
Solve with pattern blocks.		$3\frac{1}{3} - 2\frac{1}{2} =$
Grade 5: (23)	<p>Classroom Size: Number of Students</p>  <p>What is the range of the classroom size? _____</p> <p>What is the median? _____</p>	
Grade 6: (12) If it is -23F in Juneau and it is 79F in Honolulu, what is the temperature difference between the two cities?		
Grade 7: (36) Given the two angle measures, determine x.		
Grade 7: (23) David is 6 years older than Sue. If the sum of Sue and David's age is less than 42 years, what is the greatest age each can be?		

Grade 8: (8)	Pictorial Representation	Solutions
Solve for y: $3(y - 5) = -4(y + 80)$		
Grade 8: (3) Estimate how much larger 7×10^8 is than 3×10^8		
Grade 8: (5) Rewrite the radicals without the radical sign.	$\sqrt[5]{3} = \underline{\hspace{2cm}}$ $\sqrt{36x^2y^4} = \underline{\hspace{2cm}}$	
Grade 8: (33) Add the polynomial.	$(4r^3 + 3r^4) - (r^4 - 5r^3)$	
Grade 8: (12) The sum of two numbers is 25. One of the numbers exceeds the other by 9. Find the numbers.		



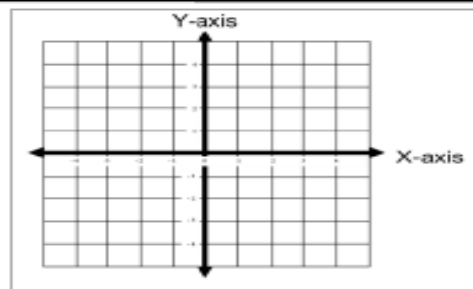
Grade 5: (16)	Pictorial Representation	Solutions								
<p>a. $\frac{1}{2} \div 2 =$ _____ b. $12 \div \frac{1}{3} =$ _____</p>		<p>a. _____ b. _____</p>								
<p>Grade 6: (26) Graph $x \geq -2$</p>										
<p>Grade 7: (36) $x + 75$ and $x + 125$ are the two given angle measures. Determine x.</p>										
<p>Grade 8: (9) Write a linear equation that has infinitely many solutions.</p>										
<p>Grade 8: (14) Find the equation that gives the rule for this table?</p>	<table border="1" data-bbox="907 1093 1302 1258"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>48</td> </tr> <tr> <td>26</td> <td>49</td> </tr> <tr> <td>27</td> <td>50</td> </tr> </tbody> </table>	x	f(x)	25	48	26	49	27	50	
x	f(x)									
25	48									
26	49									
27	50									

Algebra 1: (4)

Write an equation. The number x divided by the number b is the same as seven more than twice the sum of x and b .

Algebra 1: (8)

Identify the slope and y -intercept of the equation. Sketch the graph. $2y = -6x + 2$

**Algebra 1: (15)**

Write an equation of the line that passes through the point $(-2, -1)$ and is parallel to $y = -2x + 2$.

Algebra 1: (18)

Solve the system by substitution.

$$y = x - 1$$

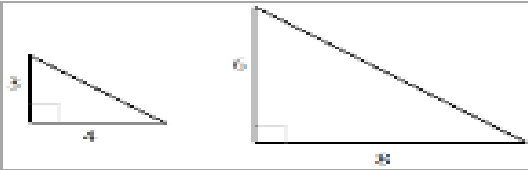
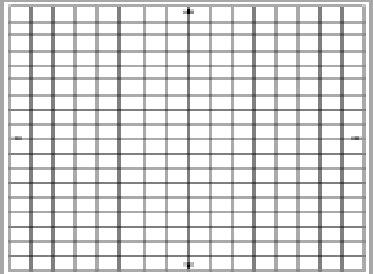
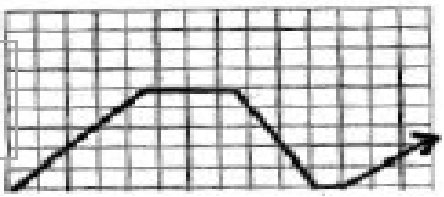
$$4x - y = 19$$

Algebra 1: (25)

Solve. $m^{\frac{3}{4}} = 27$



Name _____ **Geometry** **Week 2**

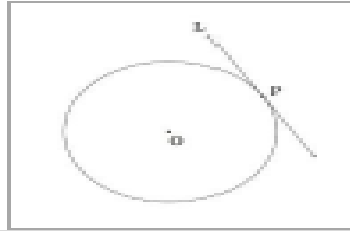
Grade 6: (32)	Pictorial Representation	Solutions
<p>Ten students earned an A in Geometry. This is 25% of the class. How many students are in the class?</p>		
<p>Grade 7: (7) Give an example to represent the associative property of multiplication.</p>		
<p>Grade 8: (20) Use the similar triangles and coordinate plane to determine the slope of the line created by the hypotenuse's.</p>		
<p>Algebra 1: (31) The line graph displays the speed over time of a bus. Describe what is happening at the different intervals.</p>		
<p>Algebra 1: (14)</p>	<p>Write an equation for the nth term of the sequence. $a_n = (n - 1)d$ 12, 23, 34, 45, (formula for nth term)</p>	

Geometry: (4)

One student defined perpendicular lines as ℓ and m are perpendicular if they meet at one point and one of the angles at their point of intersection is a right angle. Is this a correct definition? Why or why not? Is there another way to define perpendicular lines?

Geometry: (27)

Consider a circle with center O and let P be a point on the circle. Suppose L is a tangent line to the circle at P , that is L meets the circle only at P . Show that OP is perpendicular to L .



Geometry: (24)

Find m if $\sin(18m - 12) = \cos(7m + 2)$

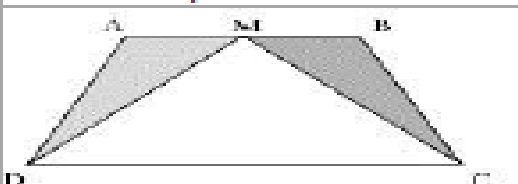
Geometry: (12)

Give an informal argument for the formula for the circumference of a circle.

Geometry: (22)

The two triangles are shaded. Based on the information given decide whether there is enough information to prove that the two triangles are congruent.


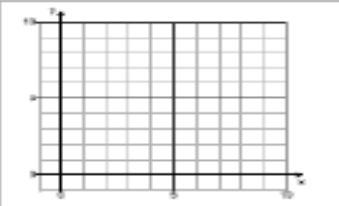
$ABCD$ is a trapezoid with $AB \parallel DC$ and M is the midpoint of side AB .





Name _____ Algebra 2

Week 7

	<i>Pictorial Representation</i>	<i>Solutions</i>
Grade 7: (28) The perimeter of the rectangle is 22 ft. The length is 7 ft. Find the width.		
Grade 8: (26) How do you determine the solution to a system of linear equations by graphing?		
Algebra 1: (28) Solve by completing the square: $x^2 - 4x - 12 = 0$.		
Geometry: (23) Given A (1, 1) and B (7, 3). Find the point P on AB such that $AP = 4 \cdot PB$.		
Geometry: (26) Show the two given circles are similar by stating the necessary transformation from C to D. C: center (2,3) radius 5; D: center (-1,4) radius 10		

Algebra 2: (10)

The matrix represents the coordinates of a quadrilateral in the coordinate plane. Find the coordinates of the vertices of the new figure after the transformation. Translation: 2 units left and 1 unit down.

$$\begin{bmatrix} 1 & 1 & 4 & 3 \\ 0 & 1 & 0 & -4 \end{bmatrix}$$

Algebra 2: (6)

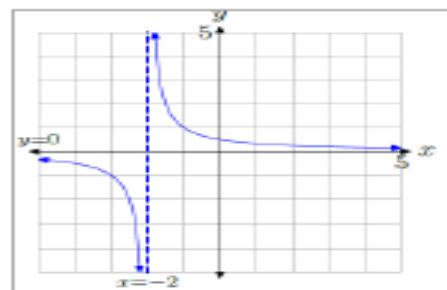
Evaluate:

$$-3 \begin{bmatrix} -7 & 19 & 15 \\ 41 & -63 & 20 \\ 2 & 0 & -8 \end{bmatrix}$$

Algebra 2: (29)

Identify the domain and any restrictions of

$$f(x) = \frac{1}{x+2}$$

**Algebra 2: (20)**

Solve by completing the square:

$$a^2 - 2a - 48 = 0$$

Algebra 2: (40)

Determine whether the function $y = x^3$ is a one-to-one function by using a table of values.