Student Learning Report: Grade 8 Math

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Process
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Process

Real Number Relationships

Process: Tools to Know		Notes	Check Up		
Applying Math in Everyday Situations	☐ I can determine what math I need to use to solve a problem. 8.1(A)				
Using Problem Solving Models	☐ I can use a problem-solving model to solve a problem. 8.1(B)				

Content		Notes	Check Up		
Representation of Real Numbers	☐ I can explain the difference between whole numbers, integers, rational numbers, irrational numbers, and real numbers using a graphic organizer. 8.2(A)				
	☐ I can write a number in scientific notation. 8.2(C)				
Magnitude of Real Numbers	☐ I can order a set of real number from least to greatest or greatest to least. 8.2(D)				
	☐ I can approximate values for numbers such as π and $\sqrt{50}$ and place them on a number line. 8.2(B)				

Process: Ways to Show		Notes	Check Up		
Creating/Using Representations	☐ I can create a representation of my math solution and explain it to another person. 8.1(E)				
Analyzing Information	☐ I can describe and connect math ideas. 8.1(F)				

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Proportional and Non-Proportional Reasoning

Process: Tools to Know		Notes	Check Up		
Applying Math in Everyday Situations	☐ I can determine what math I need to use to solve a problem. 8.1(A)				
Using Problem Solving Models	☐ I can use a problem-solving model to solve a problem. 8.1(B)				

Content		Notes	Check Up		
Slope	☐ I can graph proportions and explain how the unit rate is the same as the slope of the line. 8.4(B)				
	☐ I can explain how two points on the same line have the same slope. 8.4(A)				
Proportional Reasoning	☐ I can represent proportional situations using a table. 8.5(A)				
	☐ I can represent proportional situations using a graph. 8.5(A)				
	☐ I can represent proportional situations using an equation. 8.5(A)				
	☐ I can find *x* and *y* values in problems about direct variation. 8.5(E)				
Non-Proportional Reasoning	☐ I can find the slope and *y*-intercept from a table. 8.4(C)				
	☐ I can find the slope and *y*-intercept from a graph. 8.4(C)				
	☐ I can write an equation from a table of data. 8.5(I)				
	☐ I can write an equation from a verbal description. 8.5(I)				
	☐ I can write an equation from a graph. 8.5(I)				
	☐ I can represent non-proportional situations using a table. 8.5(B)				
	☐ I can represent non-proportional situations using a graph. 8.5(B)				
	☐ I can represent non-proportional situations using an equation. 8.5(B)				
	☐ I can identify the point where two lines intersect and can check that the *x*- and *y*-values in the ordered pair make both linear equations true. 8.9(A)				
Proportional and Non-Proportional Recognition	☐ I can explain the differences between proportional and non-proportional relationships when given a table. 8.5(F)				
	☐ I can explain the differences between proportional and non-proportional relationships when given a graph. 8.5(F)				
	☐ I can explain the differences between proportional and non-proportional relationships when given an equation. 8.5(F)				
	☐ I can identify proportional and non-proportional functions when given a real-world problem. 8.5(H)				
Function Identification	☐ I can identify a function when given ordered pairs, mappings or graphs. 8.5(G)				

Process: Ways to Show		Notes	Check Up		
Creating/Using Representations	☐ I can create a representation of my math solution and explain it to another person. 8.1(E)				
Analyzing Information	☐ I can describe and connect math ideas. 8.1(F)				

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Equations and Inequalities

Process: Tools to Know		Notes	Check Up		
Applying Math in Everyday Situations	☐ I can determine what math I need to use to solve a problem. 8.1(A)				
Using Problem Solving Models	☐ I can use a problem-solving model to solve a problem. 8.1(B)				

Content		Notes	Check Up		
Representation and Solutions of Equations/ Inequalities	☐ I can solve equations with variables on both sides of the equal sign. 8.8(C)				
	☐ I can write an equation to represent a word problem. 8.8(A)				
	☐ I can write an inequality to represent a word problem. 8.8(A)				
	☐ I can write a word problem when given an equation. 8.8(B)				
	☐ I can write a word problem when given an inequality. 8.8(B)				

Process: Ways to Show		Notes	Check Up		
Creating/Using Representations	☐ I can create a representation of my math solution and explain it to another person. 8.1(E)				
Analyzing Information	☐ I can describe and connect math ideas. 8.1(F)				

Process
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Geometry and Measurement – Two-Dimensional

Process: Tools to Know		Notes	Check Up		
Applying Math in Everyday Situations	☐ I can determine what math I need to use to solve a problem. 8.1(A)				
Using Problem Solving Models	☐ I can use a problem-solving model to solve a problem. 8.1(B)				

Content		Notes	Check Up		
Triangles and Transversals	☐ I can find angle measures related to triangles and their exterior angles. 8.8(D)				
	☐ I can find the measures of angles formed when a line crosses two parallel lines. 8.8(D)				
	☐ I can tell if two triangles are similar just by looking at their angle measures. 8.8(D)				
Dilations	☐ I can use an algebraic rule to dilate a figure on the coordinate plane. 8.3(C)				
	☐ I can identify the corresponding sides of similar figures to write proportions. 8.3(A)				
	☐ I can compare the side lengths and angles of a shape and its dilation. 8.3(B)				
	☐ I can explain how the scale factor can affect the dimensions and the area of a dilated figure. 8.10(D)				
Transformations	☐ I can use an algebraic rule to represent the translation of a figure on a coordinate plane. 8.10(C)				
	☐ I can use an algebraic rule to represent the reflection of a figure on a coordinate plane. 8.10(C)				
	☐ I can use an algebraic rule to represent a rotation of a figure on a coordinate plane. 8.10(C)				
	☐ I can explain that rotations, reflections, and translations generate congruent figures; but dilations do not. 8.10(A), 8.10(B)				

Process: Ways to Show		Notes	Check Up		
Creating/Using Representations	☐ I can create a representation of my math solution and explain it to another person. 8.1(E)				
Analyzing Information	☐ I can describe and connect math ideas. 8.1(F)				

Process
Content
Process

Geometry and Measurement – Pythagorean Theorem

Process: Tools to Know		Notes	Check Up		
Applying Math in Everyday Situations	☐ I can determine what math I need to use to solve a problem. 8.1(A)				
Using Problem Solving Models	☐ I can use a problem-solving model to solve a problem. 8.1(B)				

Content		Notes	Check Up		
Pythagorean Theorem	☐ I can use $a^2 + b^2 = c^2$ to find missing side lengths of a right triangle. 8.7(C)				
	☐ I can use $a^2 + b^2 = c^2$ to tell whether a triangle is a right triangle. 8.7(C)				
	☐ I can explain how the Pythagorean theorem ($a^2 + b^2 = c^2$) works using models or pictures. 8.6(C)				
	☐ I can use $a^2 + b^2 = c^2$ to find distances between points on a coordinate plane. 8.7(D)				

Process: Ways to Show		Notes	Check Up		
Creating/Using Representations	☐ I can create a representation of my math solution and explain it to another person. 8.1(E)				
Analyzing Information	☐ I can describe and connect math ideas. 8.1(F)				

Process
Content
Process

Geometry and Measurement – Three-Dimensional

Process: Tools to Know		Notes	Check Up		
Applying Math in Everyday Situations	☐ I can determine what math I need to use to solve a problem. 8.1(A)				
Using Problem Solving Models	☐ I can use a problem-solving model to solve a problem. 8.1(B)				

Content		Notes	Check Up		
Volume	☐ I can use the formulas for volume of cylinders, cones, and spheres to solve problems. 8.7(A)				
	☐ I can explain that the volume of a cylinder is found by multiplying the area of its circular base ($B = \pi r^2$) by its height (h). 8.6(A)				
	☐ I know that a cylinder has 3 times the volume of a cone with the same base and height. 8.6(B)				
Surface Area	☐ I can use the formulas for surface area of prisms and cylinders to solve problems. 8.7(B)				

Process: Ways to Show		Notes	Check Up		
Creating/Using Representations	☐ I can create a representation of my math solution and explain it to another person. 8.1(E)				
Analyzing Information	☐ I can describe and connect math ideas. 8.1(F)				

Process
Content
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Data Analysis

Process: Tools to Know		Notes	Check Up		
Applying Math in Everyday Situations	☐ I can determine what math I need to use to solve a problem. 8.1(A)				
Using Problem Solving Models	☐ I can use a problem-solving model to solve a problem. 8.1(B)				

Content		Notes	Check Up		
Representation of Data	☐ I can represent data on a scatterplot. 8.11(A)				
	☐ I can think of ways to pick random samples from a larger group of data. 8.11(C)				
Interpretation of Data	☐ I can use a trend line on a scatterplot to make predictions. 8.5(D)				
	☐ I can describe whether there is a linear, non-linear, or no association between the data represented on a scatterplot. 8.5(C), 8.11(A)				
	☐ I can find the mean of a set of numbers, then use it to find the mean absolute deviation. 8.11(B)				

Process: Ways to Show		Notes	Check Up		
Creating/Using Representations	☐ I can create a representation of my math solution and explain it to another person. 8.1(E)				
Analyzing Information	☐ I can describe and connect math ideas. 8.1(F)				

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Personal Financial Literacy

Process: Tools to Know		Notes	Check Up		
Applying Math in Everyday Situations	☐ I can determine what math I need to use to solve a problem. 8.1(A)				
Using Problem Solving Models	☐ I can use a problem-solving model to solve a problem. 8.1(B)				

Content		Notes	Check Up		
Calculations	☐ I can calculate and compare simple and compound interest. 8.12(D)				
	☐ I can explain how small investments can grow over time. 8.12(C)				
	☐ I can estimate the costs of going to college and develop a savings plan to prepare for these costs. 8.12(G)				
	☐ I can calculate (with technology) how much it costs to repay a loan under various conditions (interest rate, loan length, etc.). 8.12(A), 8.12(B)				
Analysis	☐ I can name different ways to pay for things (cash, credit, debit) and discuss the advantages and disadvantages of each method. 8.12(E)				
	☐ I can give examples of being financially responsible and irresponsible. 8.12(F)				

Process: Ways to Show		Notes	Check Up		
Creating/Using Representations	☐ I can create a representation of my math solution and explain it to another person. 8.1(E)				
Analyzing Information	☐ I can describe and connect math ideas. 8.1(F)				