8th Grade Module 4 – Linear Equations

	4 - Mastery	3 - Proficient	2 - Basic	1 - Below Basic	0 - No Evidence
Topic A (8.EE.7)	Meets **all** of the criteria in a Level 3 **Completes tasks including synthesis and evaluation**	Solve linear equations with rational numbers and variables on both sides, that require both distributing **and** combining like terms. **Explain** why there is one, infinitely many, or no solution for an equation.	Solve linear equations with rational numbers and **variables on both sides**, that require distributing **or** combining like terms. **Determine** if there is one, infinitely many, or no solution for an equation.	Solve linear equations with rational numbers and **variable(s) on one side**, that requires distributing **or** combining like terms.	**Shows no evidence of proficiency** Little evidence of reasoning or application to solve the problem.
Topic B and C (8.EE.5, 8.EE.6)	Meets **all** of the criteria in a Level 3 **Completes tasks including synthesis and evaluation**	Graph proportional relationships represented in different ways, identify the unit rate as slope, **and compare the relationship of two proportional relationships.** Given the graph of a line, **derive the equation y=mx+b** for a line Use similar triangles to **explain** why the slope is the same between any two points on a non-vertical line in the coordinate plane	Graph proportional relationships represented in different ways and **identify the slope.** Given the graph of a line, **derive the equation y=mx** for a line Use similar triangles to **demonstrate** that the slope is the same between any two points on a non-vertical line in the coordinate plane	Graph proportional relationships represented in different ways (words, tables, an/or equations). Given the graph of a line, **identify the y intercept and slope**. **Identify** that the slope is the same between any two points on a non-vertical line in the coordinate plane	**Shows no evidence of proficiency** Little evidence of reasoning or application to solve the problem.
Topic D (8.EE.8)	Meets **all** of the criteria in a Level 3 **Completes tasks including synthesis and evaluation**	Solve a system of equations using **all** of the following: ● Substitution ● Elimination ● Graphing **and justify** why the point of intersection on a graph is a solution. Solve simple cases by inspection	Solve a system of equations using **2** of the following: ● Substitution ● Elimination ● Graphing **Solve simple cases by inspection**	Solve a system of equations using **1** of the following: ● Substitution ● Elimination ● Graphing	**Shows no evidence of proficiency** Little evidence of reasoning or application to solve the problem.

8.EE.B.5 - Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

8.EE.B.6 - Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; 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.

8.EE.C.7 - Solve linear equations in one variable.

a - 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).

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

8.EE.C.8 - Analyze and solve pairs of simultaneous linear equations. Specifically:

a - Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.

b - Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.