***MAFS.7.NS.1 Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.***

 **MAFS.7.NS.1.1** Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

**MAFS.7.NS.1.1a** Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.

**MAFS.7.NS.1.1b** Understand 𝑝+𝑞 as the number located a distance |𝑞| from 𝑝, in the positive or negative direction depending on whether 𝑞 is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.

**MAFS.7.NS.1.1c** Understand subtraction of rational numbers as adding the additive inverse, 𝑝 –𝑞=𝑝+(–𝑞). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.

**MAFS.7.NS.1.1d** Apply properties of operations as strategies to add and subtract rational numbers.

**Item Type**

**Equation Editor**

*Teachers, in order for students to be able to practice this Technology-Enhanced Item (TEI) Type for the FSA, they should access the given hyperlink. The” Equation Editor” tutorial on the FSA portal can be used to solve this sample item. After the initial link to the portal, students would need to click the* ***green*** *Next* ***arrow****.*

[*http://demo.tds.airast.org/eqtutorial/?c=florida\_pt&language=true#*](http://demo.tds.airast.org/eqtutorial/?c=florida_pt&language=true)

***Students would then need to select two options from the drop down menus.***

***NOTE: Based on the given information in the item, the teacher would need to direct students as to which selection to make in the Question drop down menu because the Editor may be slightly different for each.***

 *Grade: (6-12) and Question:*

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