## NWEA Assessment Item Illustrating 8.EE.C.8c

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**Domain:** Expressions and Equations

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

**Calculator Availability:** Yes

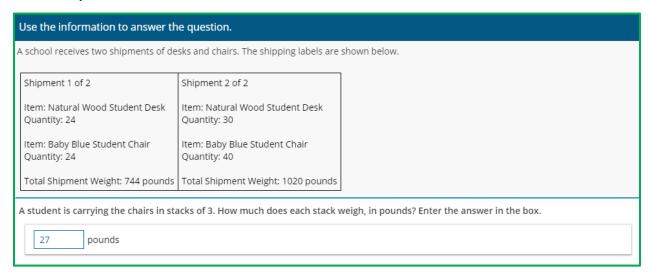
**Alignment: 8.EE.C.8c:** Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.* 

This item presents a real-world scenario with numbers and a specific question intentionally chosen to make it difficult to use a guess-and-check process to solve the problem, thus encouraging students to set up a system of equations and solve the problem algebraically. By determining the correct answer, students provide substantial evidence that algebraic tools were used.

**Coherence:** The standards in cluster 8.EE.C build on the grade 7 fluency standard for solving equations of the form px + q = r, where p, q, and r are specific rational numbers. As students become familiar with deriving, creating, and solving systems of equations—in both mathematical and real-world contexts—they are building the foundational skills to understand and work with systems of inequalities HSA-CED.A.3 and to work with more complex systems in high school courses.

**Rigor:** This item attends to procedural skill and application. Students use grade-level procedural skill to create and solve the system of equations. The mathematics is not immediately obvious, requiring students to recognize that creating a system of equations is necessary to answer the question. Additionally, students must attend to the specific question being asked, which is not simply the solution to the system.

## **Answer Key:**



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