NWEA Assessment Item Illustrating 3.OA.D.8

Domain: Operations and Algebraic Thinking
3.OA.D: Solve problems involving the four operations, and identify and explain patterns in arithmetic.
Calculator Availability: No

Use the information to answer the question.

Last year a squirrel collected 126 acorns to save for the winter. So far this year, he has collected acorns for 8 days. Each day he has collected 9 acorns.

How many <u>more</u> acorns does the squirrel need to collect this year to equal the number collected last year? Enter the answer in the box.

[   ] acorns

Alignment: 3.OA.D.8: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

By grade 3, students are expected to solve a range of problem types involving all four operations and with unknowns in all positions. This item meets the portion of the standard about solving two-step word problems. The numbers used in the item reflect grade-level computation expectations.

Coherence: Students have been solving addition and subtraction word problems since kindergarten. In kindergarten, students solved single-step problems within 10, utilizing only the four most basic problem types outlined in Table 1 of the CCSS Mathematics Glossary.[K.OA.A.2] In grade 1, students were introduced to more problem types, greater numbers, and the idea of using a symbol for the unknown.[1.OA.A] In grade 2, students were expected to solve one- and two-step problems for all problem types. In grade 3, problem solving has expanded to include multistep problems with all four operations with letters for the unknown.[3.OA.D.8] As students progress through the grades, they will expand problem solving beyond whole numbers. In grade 4, students will solve addition and subtraction word problems involving fractions with like denominators and word problems involving multiplication of fractions and whole numbers.[4.NF.B] In grade 5, students will solve word problems involving addition and subtraction of fractions with like denominators,[5.NF.A.2] multiplication of fractions and mixed numbers,[5.NF.B.6] and division of unit fractions and whole numbers.[5.NF.B.7]

Rigor: This item attends to procedural skill and application. Multiplying single-digit numbers and subtracting within 1,000 are both grade-level procedures. Because of the nature of the problem, the solution path is not immediately obvious and requires interpretation of the relationship between the various quantities to determine which operations to perform and in which order.

Answer Key:

Use the information to answer the question.

Last year a squirrel collected 126 acorns to save for the winter. So far this year, he has collected acorns for 8 days. Each day he has collected 9 acorns.

How many <u>more</u> acorns does the squirrel need to collect this year to equal the number collected last year? Enter the answer in the box.

[54] acorns

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