NWEA Assessment Item Illustrating 6.RP.A.3.c

Domain: Ratios and Proportional Relationships
6.RP.A: Understand ratio concepts and use ratio reasoning to solve problems.
Calculator Availability: Yes

Use the information to answer the question.

Holly's recipe for birdseed is 80% sunflower chips. Holly has 16 ounces of sunflower chips.

How many ounces of birdseed can Holly make using her recipe? Enter the answer in the box.

[   ] ounces

Alignment: 6.RP.A.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.

Ratios and proportional relationships are both foundational for future study in mathematics and science and used frequently in everyday life. This item requires students to understand the concept of percent, (80% as 80/100), and use that knowledge to find the whole, given the percent. Students may create a table where 80% of the recipe corresponds to 16 ounces of sunflower chips, 40% of the recipe corresponds to 8 ounces of sunflower chips, 10% of the recipe corresponds to 2 ounces of sunflower chips, and 1% of the recipe corresponds to 0.2 ounces of sunflower chips. Therefore, 100% of the recipe corresponds to 20 ounces of sunflower chips. Alternatively, students may simply multiply 16 ounces by 100/80 to get 20 ounces of sunflower chips.

Coherence: Percent concept development builds on the work of prior grades, in which students developed their understanding of fractions with denominators of 100[4.NF.C.5] and solved problems involving multiplication of a whole number by a fraction.[5.NF.B] Calculating with percentages is a foundation for solving more complex problems using proportional relationships.[7.RP.A]

Rigor: This item attends to conceptual understanding and application. Students use the concept and meaning of percent to solve a problem. Because the item requires students to find the whole, the mathematics is not immediately obvious, and students need to engage in some reasoning about—and interpretation of—the context.

Answer Key:

Use the information to answer the question.

Holly's recipe for birdseed is 80% sunflower chips. Holly has 16 ounces of sunflower chips.

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[20] ounces

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