

## Grade 3: Plums

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**3.OA.A.1** - Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each.

Four situations are described below. In one situation, the number of plums is equal to  $8 \times 4$ . Which situation is it?

- A) Hershel has 8 plums and gives 4 plums to each friend.
- B) Jazmine makes 8 goodie bags with 4 plums in each bag.
- C) Lawrence has 8 plums and Kaliyah has 4 more plums than Lawrence.
- D) Sabrina has 8 ripe plums and 4 unripe plums.

Answer:

### Solution

Correct if student selects B: Jazmine makes 8 goodie bags with 4 plums in each bag.

The product  $8 \times 4$  means the number of things in 8 groups of 4 things each, or the number of things in 4 groups of 8 things each. In situation B, there are 8 groups of plums with 4 plums in each group. So the number of plums in situation B is  $8 \times 4$ . The correct answer is B.

It is not necessary to calculate the value of the product  $8 \times 4$  to answer the question. (The question is not about what  $8 \times 4$  equals—the question is about what  $8 \times 4$  *means*.)

In none of the other situations is the number of plums  $8 \times 4$ :

- In situation A, there are 8 plums. (Situation A could be thought of as a division situation because there are  $8 \div 4 = 2$  friends.)
- In situation C, there are  $8 + (8 + 4)$  plums.
- In situation D, there are  $8 + 4$  plums.

If students have trouble answering this question, you might ask them to draw a diagram of each situation. Drawing the diagrams might help to clarify which operations are relevant to each situation.

### Elaboration on Alignment

The product  $8 \times 4$  means the number of things in 8 groups of 4 things each, or the number of things in 4 groups of 8 things each.

The problem asks students to identify which situation from the four choices describes  $8 \times 4$ . Choice B (second choice) expresses the total number of plums in 8 groups of 4 plums in each group. The idea for this task is for students to be able to use equal groups and repeated addition to understand the concept of multiplication. As students analyze the choices, they are also comparing and contrasting the situations to match the product  $8 \times 4$ .

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See a digital version of this task at Learning Heroes' Readiness Check:

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Name: \_\_\_\_\_

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