3.OA.B

Understand properties of multiplication and the relationship between multiplication and division.

1. Decide whether each expression is equal to 5 × 9. Put a check in the Yes or No column for each expression.

|  | **Yes** | **No** |
| --- | --- | --- |
| 5 × ( 5 + 4) |  |  |
| (5 × 5) + 4 |  |  |
| (5 × 5) + (5 × 4) |  |  |

2. Which equation has the same unknown value as 48 ÷ 6 = □?

A. 48 × □ = 6

B. 6 × □ = 48

C. □ ÷ 6 = 48

D. □ ÷ 48 = 6

3. What unknown number makes the equation true?

5 × 8 = 10 × 8 ÷ □

□ = \_\_\_\_\_

4. Mrs. Tran plants 12 sunflowers in her garden. She plants them in 3 rows. Mrs. Tran adds 2 more identical rows of sunflowers to her 3 original rows.

Mrs. Tran figured out how many flowers she planted. Her work is shown below. Would Mrs. Tran get the same result if she multiplied 5 × 4? Justify your answer with words and numbers.

**Teacher Material**

3.OA.B

Reason about and solve one-variable equations and inequalities.

| **Question** | **Claim** | **Key/Suggested Rubric** |
| --- | --- | --- |
| 1[[1]](#footnote-1) | 1 | **1 point:**     |  | **Yes** | **No** | | --- | --- | --- | | 5 × ( 5 + 4) |  |  | | (5 × 5) + 4 |  |  | | (5 × 5) + (5 × 4) |  |  | |
| 21 | 1 | **1 point:** Selects B |
| 31 | 1 | **1 point:** 2 |
| 4[[2]](#footnote-2) | 3 | **1 point:** If there are 12 sunflowers planted in 3 rows, there are 4 sunflowers in each row. Two more rows would mean 4 more sunflowers in each of the 2 rows. Since there are 5 rows with 4 sunflowers in each row, another way to write this would be 5 × 4 = 20. |

1. From Smarterbalanced.org. Grade 3, Claim 1, Target B Item Specifications. Internet. Available from <http://www.smarterbalanced.org/smarter-balanced-assessments/>; accessed 11/2015. [↑](#footnote-ref-1)
2. From EngageNY.org of the New York State Education Department. Grade 3 Mathematics Module 1, mid-module assessment. Internet. Available from <https://www.engageny.org/resource/grade-3-mathematics-module-1>; accessed 11/2015. [↑](#footnote-ref-2)