Performance Task – Order of Operation

Which expression means the same as the phrase below?

Subtract 3 from the product of 8 and 5.

1. (5 × 8) + 3
2. (5 × 8) − 3
3. 5 ×(8 − 3)
4. 5 ×(8 + 3)

**Key: B**

**Measured CCLS: 5.OA.2**

**Commentary:** The question measures 5.OA.2 because it asks the student to write a simple expression that records calculations with numbers. In this case the student must identify the expression that records the calculation, “subtract 3 from the product of 8 and 5.”

**Extended Rationale**

**Answer Choice A:** “(5 × 8) + 3”; this response may reflect a misunderstanding of the calculation described by the given phrase. A student who selects this response may have recognized that the product of 8 and 5 must be found first but then mistakenly added 3 instead of subtracting 3 from the product.

**Answer Choice B:** “(5 × 8) – 3”; this response correctly represents the given phrase as a numerical expression.

The given phrase describes a calculation in which the product of 8 and 5 is found first and 3 is then subtracted from the product. A student who selects this response understands how to write a simple expression that records calculations with numbers.

**Answer Choice C:** “5 × (8 – 3)”; this response may reflect a misunderstanding of the calculation described by the given phrase. A student who selects this response may have understood that the values in the given phrase should be included in the numerical expression but did not understand which operations should be included and in which order.

**Answer Choice D:** “5 × (8 + 3)”; this response may reflect a misunderstanding of the calculation described by the given phrase. A student who selects this response may have understood that the values in the given phrase should be included in the numerical expression but did not understand which operations should be included and in which order.

Answer choices A, C, and D are plausible but incorrect. They represent common student misunderstandings and errors made when writing a simple expression that records calculations with numbers.

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