

# PSSA Open Ended Prep – Order of Op.

Please read the given situation carefully. Then, answer each question that follows. If you are asked to **EXPLAIN** something, please do so using **COMPLETE SENTENCES!**

Situation:

Mr. Seidel presents the following problem to his period 10 class:

“Simplify the expression:  $310 - 20 \div 2 \times 5 + 13$ ”

Below are three student answers:

Archie	Norma	Victoria
$310 - 20 \div 2 \times 5 + 13$	$310 - 20 \div 2 \times 5 + 13$	$310 - 20 \div 2 \times 5 + 13$
$310 - 20 \div 10 + 13$	$290 \div 2 \times 5 + 13$	$310 - 10 \times 5 + 13$
$310 - 2 + 13$	$145 \times 5 + 13$	$310 - 15 + 13$
$310 - 15$	$725 + 13$	$295 + 13$
295	738	308

Part A) Archie made two mistakes. **EXPLAIN** what those two mistakes were in regards to the order of operations.

Part B) Simplify the expression yourself using the order of operations.

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Part C) Based on what you see, which of the three students knows the LEAST about the order of operations? **EXPLAIN** why you chose that student over the other two students.

Part D) Where could you insert parenthesis in the original problem so that the answer would be 130? **PROVE IT** by doing the problem with the parenthesis inserted where you think they should go.

Part E) Write the order of operations down using your own words.