

ALGORITHMIC TOOLBOX - WEEK 6

MAXIMUM VALUE OF ARITHMATIC QUIZ

1. What is the maximum value of an expression $5-8+7\times 4-8+9$ that can be obtained by placing pairs of parentheses into it? For example, $((5-8)+7)\times 4-8+9=17$, $(5-(8+7))\times (4-(8+9))=130$. But the maximum value is even larger! Try a few ways of placing parentheses into this expression and then check your intuition by submitting the maximum value that you've found to the field below. As you see, the question is non-trivial already for such a small input size. However, do not spend too much time on this quiz: we will find the answer to this question together by the end of this lesson; you will then be able to get back to this quiz to submit the right value. Moreover, you will be able to implement an algorithm solving this problem quickly.

Sol. 200;

$$200 = 5 - ((8 + 7) \times (4 - (8 + 9)))$$