

Question 1. Create your own example of Russian arithmetic.

Question 2. Look at a classmate's example of Russian arithmetic. Determine whether he or she executed the algorithm correctly.

Question 3. What does Russian arithmetic accomplish?

Question 4. What can you do to test your hypothesis? For what inputs does your hypothesis work? What happens if try more general kinds of inputs?

Question 5. Write a precise explanation of what the Russian arithmetic algorithm is. Your explanation should

- be clear enough for someone who does not already know the algorithm, and who has not seen an example of it, to execute the algorithm on any inputs, just by following your instructions,
- make explicit what the input to the algorithm is,
- make explicit what the output of the algorithm is,
- ensure that a reader always knows what to do at each step, and never encounters a situation where the next step is unclear,
- make clear to the reader when the algorithm's execution is complete and what the output is,
- not contain any examples: the reader should understand what to do only from your explicit instructions,
- be written in complete English sentences and paragraphs (not as a flowchart or other kind of diagram).

Question 6. State precisely what the algorithm accomplishes and prove your claim is correct.