Graph Transformation with GeoGebra

In a Year 9 lesson, students are introduced to graph transformations using GeoGebra. The teacher shows them how to input functions and asks the students to explore these on their own for a while. While walking around the class, she witnesses the following dialogue between student A and student B:

**Student A:** Hey, Student B, I drew the $y=x$ graph: it’s a straight line passing through the centre of the axis.

**Student B:** Nice! I did that as well. But now … I’ve moved it one step to the right.

**Student A:** Hey, let me try that! Okay, I type: $y=x+1$ and press enter. It did move! But wait, why did mine go to the left? I typed +1, not -1!

You are the teacher and you just heard this exchange between students A and B.

**Questions:**

a. Why did student A encounter this issue with the graph?
b. How would you respond to student A and to the whole class?
c. How would you use GeoGebra, or another software, to support your responses to the above?

This is a Task developed by the MathTASK 2016-17 team. Let us know whether it is useful and how we can improve it at @mathtask or email Irene Biza at i.biza@uea.ac.uk. For more tasks, visit MathTASK.