Conclusion/Questions

When I picture a student engaging in Computational Thinking, they are thinking (at least eventually) with computers, which have their own ways of “thinking.”

The computer is more powerful in that it enables students to calculate, visualize, simulate, and experiment like never before. They can calculate faster, with bigger numbers. They can visualize in highly organized ways. They can simulate phenomena too complex to be explored otherwise. And, at the touch of a button, they can try something and see what happens; then try something else!

But the computer is also constrained by its information-processing agent and operating environment, which can influence the way it “thinks” about mathematics (Balacheff, 1989). The student must not only tell the computer what to do; they must discover what the computer does.

The example on the left shows how this could lead to enriching mathematical and computational experiences.

It remains to discuss...

(1) Which part of the example uses computational thinking?

(2) Which part of the example uses mathematics thinking?

(3) Would an activity like this be appropriate for mathematics classrooms? If so, at what level?

References:


