

10/5/15

① During 4th period, you mentioned that you ~~are~~ appreciated students using "I agree/disagree" to talk about math concepts. Is this something you specifically ask students to do? How do you teach students how to ~~the~~ discuss math ~~is~~ with their groups/the whole class?

② While I was walking around during Trashketball I noticed that a few students were having trouble finding the "zero" point on the table. Why is this/how do you teach the concept of going backwards in the table? I was having trouble explaining why students need to subtract when going from step ~~is~~ 1 to step 0.

1) In general, students (especially Freshmen) need to be trained to speak coherently & politely about Math & to each other. Sentence Frames are a great strategy for this, especially if they are posted around the room. Having activities that explicitly focus on discourse is another way to set the tone for how we speak about math & to each other.

In 4th period specifically, there was a moment a few weeks ago where students kept shouting "WRONG!" when students were explaining. I was able to pause class & explain that I didn't like the aggressiveness of the comment and that we still don't know who is right or wrong - there are many ways to solve problems. So, I asked them to use the phrase

"I disagree" instead. It was more polite and more accurate - both people could still be incorrect, we just have to uncover which one ~~is~~ we believe.

Since then, things have gone much better, but that's almost a special situation where the moment was right. I stopped class to address it. That moment hasn't happened so naturally in 5th period.

2) Yah - the pattern-to-table-to-function process gets a little arbitrary when you have to go backwards to 0. The reasoning has to do with the ~~old~~ ~~state~~ Common Core standards, which defines a sequence as starting with $a_1 \leftarrow 1!$, rather than $a_0 \leftarrow \text{zero!}$. But, the standards also make the connection between arithmetic sequences, linear functions, and linear functions "start" at 0, so there's this awkward disconnect that needs to be addressed.

Last year, I taught this unit after we had graphed lines & talked about slope & intercepts, so the 0 on the table was necessary because it's the y-intercept of the graph & you can use that to get the equation, which was a smoother explanation. This year, the reasoning is a lot more arbitrary

but still connected to needing the "0" pt on the graph, or so that the equation will actually generate the correct table.

When we get back from break, we'll use these patterns to talk explicitly about slope & intercepts, and how to graph from an equation or table, which might make this "0 point" easier to understand.