**Big Idea in Algebra #2:** Reading pp. 25-29 in Expressions, Equations, and Functions (NCTM, 2011)

**Growing Dots** (Seago, Mumme, & Branca, 2004). *Learning and Teaching Linear Function*

Work on the task independently. Your instructor will let you know when it appears peers are ready to chat. As you answer the questions, attend to our mathematics norms (e.g., solving it a different way).

Start this task off by noting that in our world we know there are viruses. These viruses spread differently. In this task, we are going to represent 1 “germ” of a particular virus with each dot. As each minute passes the virus spreads and there are more and more germs.

See solutions and ideas in dropbox.

Select and Sequence students work for drawing out algebraic connections

Pay close attention to representations and explain that students should be able to explain their algebraic representation using the growing dots pictures.

**SMP Evidence:** Write down below which of the 8 SMP’s **you** were engaging in during the solving of this task.

From our classes’ mathematical discourse about this task, what evidence did you see that **others** were engaging in the particular SMP’s?

**Video: Student’s algebraic connections**

Pay close attention to the student thinking in the video.

What evidence is there about what particular students know?

Play video GH06111612 ~10min

Students should be directed to these three questions prior to the video

Use these three questions as discussion points following the video.

What evidence is there about what particular students do not know?

Describe any reasoning or sense making occurring in the video.

After the video and questions ask them how 7-10th grade students came up with each of the following generalizations

t \* 4 + 1 (t + 1) \* 4 – 3 (2t + 1)+ 2t 2(2t + 1) - 1

After discussion pass out Solution methods sheet

**Assignment:** Best Guess is we won’t get to the student solutions above. If not, assign as HW