

RAMP-A

JUNE 26, 2013

SUMMER INSTITUTE

Today's Goals

- * Do some math.
- * Watch a video of a lesson to discuss teacher and student roles and coherence.
- * Compare linear, exponential, and quadratic functions.
- * Discuss and reflect on our teaching practices in light of the ideas we have encountered.
- * Meet with our administrators.

Good Morning!



- * Discuss what you are most looking forward to doing this summer with any free time.

Be aware of the Math Norms

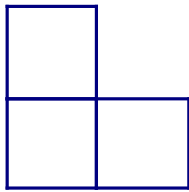
- * Slowly and carefully, find as many ways as you can to solve the task.
- * Reflect on the strategies you are using, and their relation to the SMP.
- * Leave your rule in a form that shows how you thought about it.
- * Illustrate your rule in your diagram, table, or graph.

Staircase

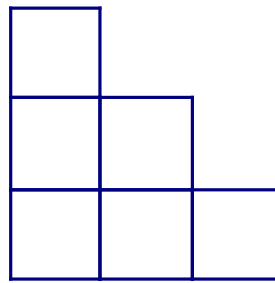
- * The following diagrams represent the first four stages of a pattern. How many small squares are in the 5th stage? The 10th stage? Any stage?



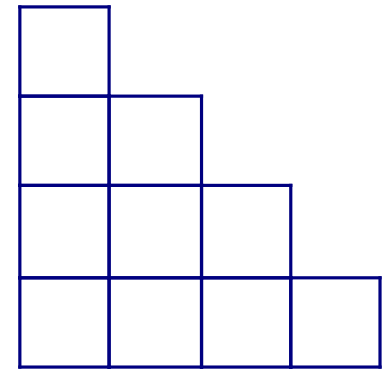
Stage 1



Stage 2



Stage 3



Stage 4

Separate rule and illustration

- * As a group, write each of your rules on a blank sheet of paper in large print with a marker.
- * Put the illustration that shows how you derived your rule on a large sheet of paper or poster and post it.
- * Put your rule in one box and post the illustration of it on the wall.

Matching!

- * First individually, then in your groups, decide which rule goes with which diagram.
- * Which solutions used similar mathematical ideas? Explain.

Which solutions would you have students present if your purpose was

- * Understand equivalent expressions?
- * Interpret expressions for functions in terms of the situation they model.
- * Create equations that describe numbers or relationships?
- * Compare recursive and explicit forms of functions?
- * Understand patterns of change of a quadratic function?
- * Discuss use of SMP explicitly?

Regroup into your PLCs

- * Compare this task with the Dangerous David task:
- * How are the ideas of function the same?
- * How are the ideas of function different?
- * How are these ideas different from initial ideas of functions as input-output machines?

Reflect

- * What are some connections between rich tasks, coherence, and lesson planning?

Respond at

<http://todaysmeet.com/RAMP-AConnection>

Break!

- * Snacks!
- * Don't forget to add a book to our Book!

Observing a Lesson

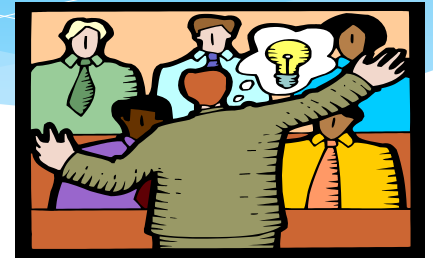


Goals:

- * Become aware of our reactions to a lesson.
- * Notice student and teacher roles in the classroom.
- * Look for evidence of coherence in a lesson.
- * Practice using ***evidence*** and avoiding evaluative comments.

Discuss (using evidence)

- * Purpose of the lesson
- * Evidence of coherence
- * How were concepts and procedures approached in the lesson?
- * Roles of teacher and students
- * What do you think this teachers' beliefs could be about teaching and learning?



Reflection

* Go to [Todaysmeet.com/TIMSS](https://todaysmeet.com/TIMSS) and answer the prompt:

What ideas did you get from the discussion in your group?

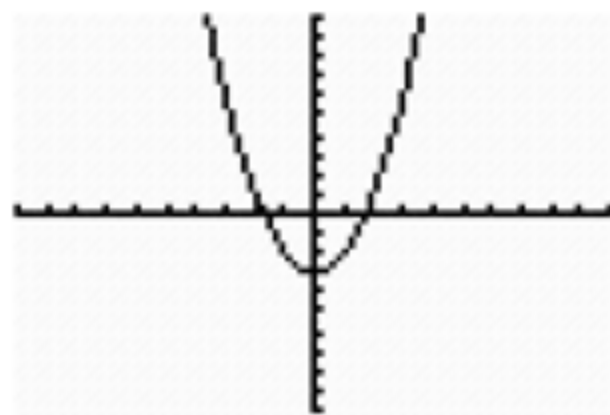
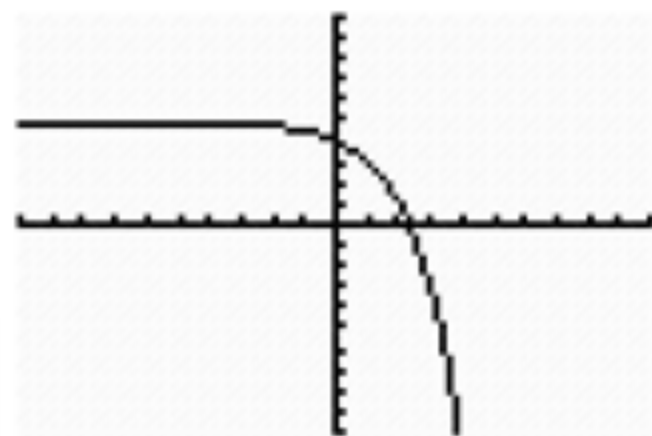
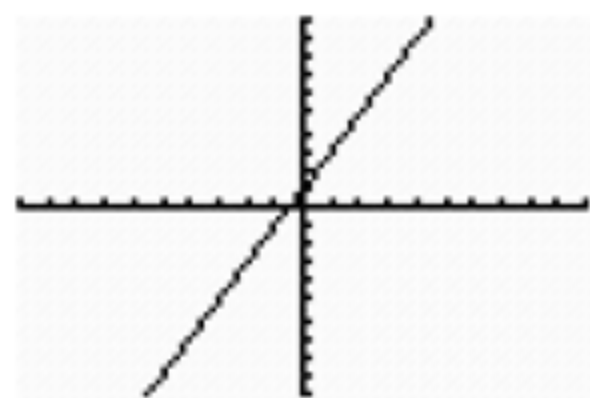


Lunch, and...



- * Add post-its to the posters in the back:
- * What did you notice about ***teacher and student roles?***
- * What did you notice about ***coherence?***

Linear, Exponential, or Quadratic?



Reflect

A colleague tells you that she is going to use a rich task with her honors class, but that she would never use it with her 'low' class. What could you say to her? Respond at:

http://todaysmeet.com/RAMP-A_RichTask

Break!



PLC Discussion



- * Purpose:
 - * Learning Engineers concept:
 - * Connecting RAMP-A goals and your practice
 - * Developing team support systems
- * Structure:
 - * Principals: Brief observations of PLC discussions
 - * Middle school teachers sit together
 - * High school teams by school

Learning Engineers

- * **Apply** all knowledge to problems of practice
- * **Notice** what is working well, what needs improvement
- * **Recognize** when new knowledge needed
- * **Seek out** new knowledge to
 - * explore problems
 - * devise solutions
 - * evaluate results

Teacher Voice: Making Connections

- * Connect your practice to:
 - * RAMP-A goals
 - * Learning Engineer work
 - * Your goals
 - * Focus and Coherence
 - * Team support
 - * RAMP-A support

RAMP-A Goals for Teachers and Students

- * Increase teachers' **content knowledge** in algebra and functions in the Common Core State Standards in Mathematics (CCSS).
- * Improve teachers' **instructional strategies** in algebra.
- * Improve teachers' understanding of and ability to teach the **Standards for Mathematical Practice (SMP)**.
- * Improve **student achievement and interest** in math.

Meet with your administrator

RAMP-A Year 2 Workshop Dates

- * September 27
- October 25
- November 22
- January 24
- March 21
- April 18