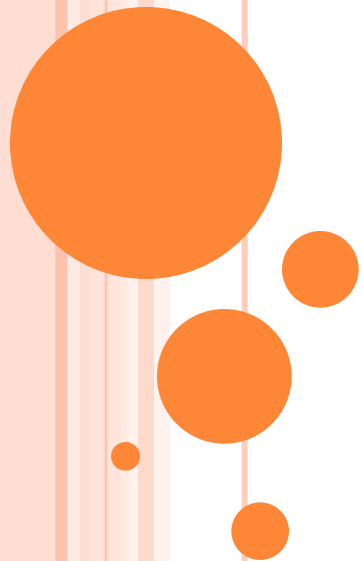


# **HELPING STUDENTS DEVELOP MATHEMATICAL HABITS OF MINDS WITHOUT COMPROMISING KEY CONCEPTS FROM THE SYLLABUS**

**A Panel Discussion**



# ORGANIZING CHAIRS

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# PANELISTS

- Al Cuoco [ACuoco@edc.org](mailto:ACuoco@edc.org)  
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University of California San Diego
- Annie Selden [js9484@usit.net](mailto:js9484@usit.net)  
New Mexico State University



# AGENDA

- Introduction (5 minutes)
- Presentations (40 minutes)
  - Al Cuoco
  - Hyman Bass
  - Guershon Harel
  - Annie Selden
- Open Discussion (30 minutes)



# TWO TYPES OF STUDENTS

- When you were a student did you find it easy to understand certain math concepts that your classmates had to struggle with?
- Is it because ...

You like math.

You have the “math” gene.

As a child, you were asked  
a lot of thinking questions.

You had strong foundation then.

You thought like a mathematician.

They hated math.

They don't.

They weren't.

They didn't.

They didn't.

# TWO TYPES OF STUDENTS

As teachers, we can help students develop mathematical understanding and mathematical habits of mind.

Unfortunately, most teachers focus on facts, procedures, theorems, and proofs.

You like math.

You have the “math” gene.

As a child, you was asked a lot of thinking questions.

You have strong math foundation.

You think like a mathematician.

They hate math.

They don't.

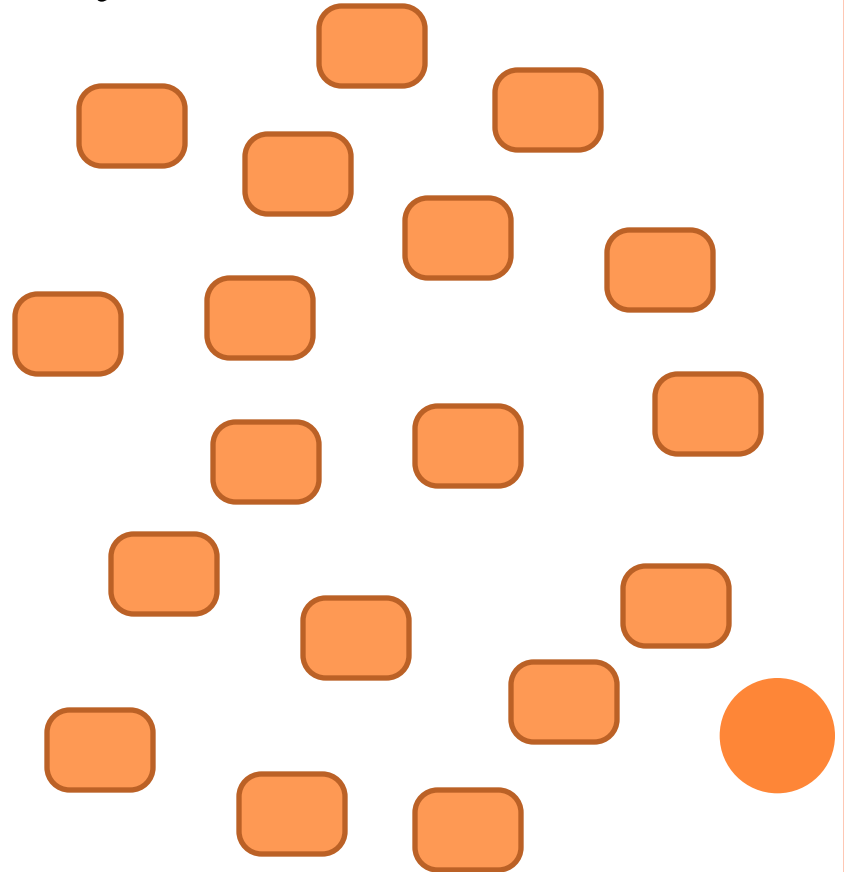
They weren't.

They don't.

They don't.

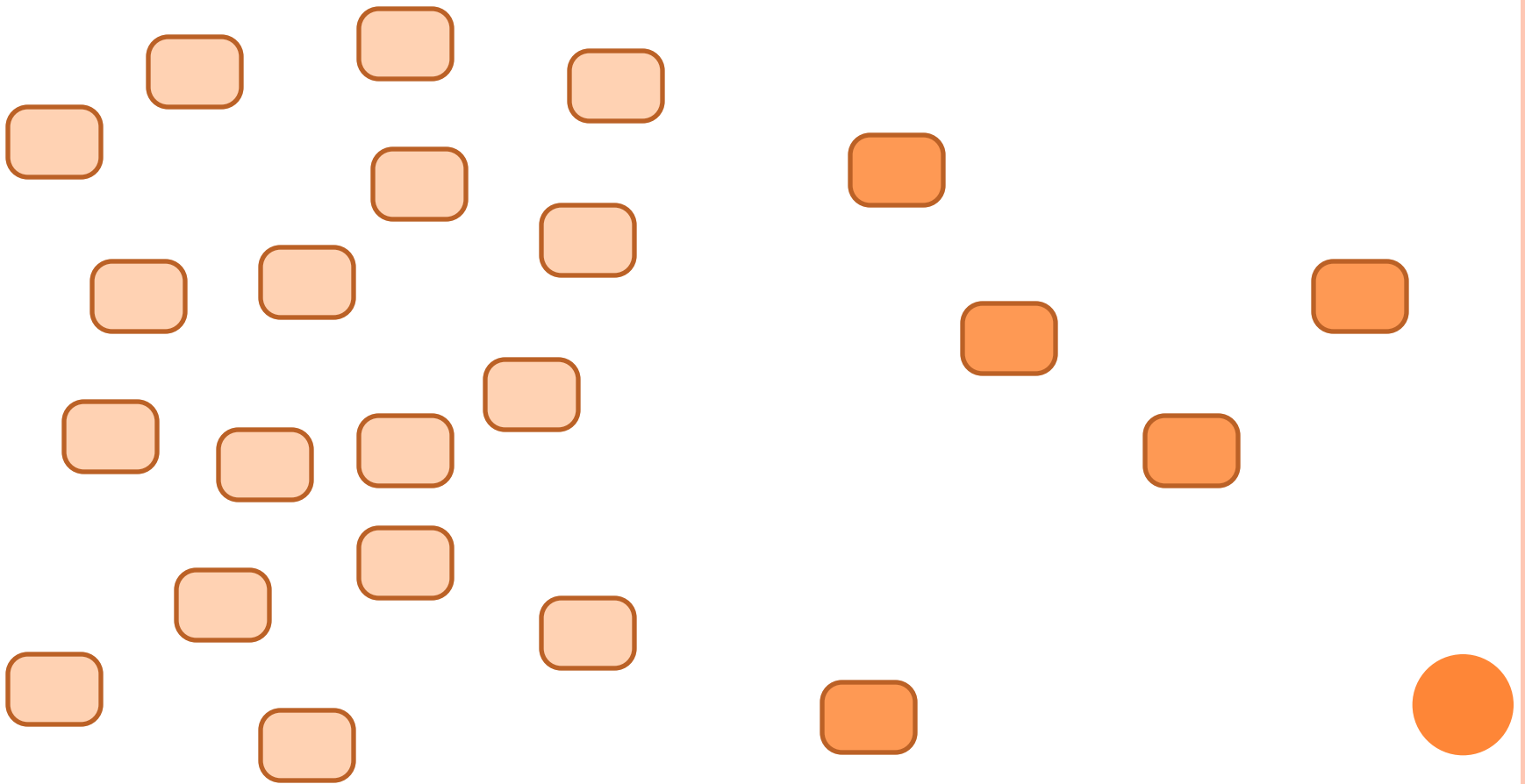
# TWO TYPES OF STUDENTS

Consequently, for every student with mathematical habits of mind, there are many more who don't.



# TWO TYPES OF STUDENTS

Can this trend be reversed?





# HELPING STUDENTS DEVELOP MATHEMATICAL HABITS OF MINDS WITHOUT COMPROMISING KEY CONCEPTS FROM THE SYLLABUS

## Presenters

- Al Cuoco
- Hyman Bass
- Guerson Harel
- Annie Selden

