

# Supporting Reasoning and Explanations in Elementary Mathematics Teaching **Session 7 Slides**

## Overview of Session 7

- Capitalizing on the explanations that students share
- Engaging in a video workshop

7.1a

### Betsy's conjecture

Betsy's Conjecture: An odd number plus an odd number equals an even number.

#### Context

- Third graders (8 year-olds)
- · Late January
- Students have been working on concepts of even and odd numbers, and patterns with even and odd numbers
- Diverse classroom, many English language learners

7.2a

### Focus questions

To what extent does the explanation:

- Have a clear purpose
- Have a logical structure
- Use representations and language clearly and carefully
- Have a focus on meaning that is oriented to the listener(s)

7.2b




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### Following up on an explanation

- While the explanation is complete and very detailed, it is also very quick.
- How do you follow up on a explanation such as this one in ways that support the learning of both the student who shared and the rest of the students?

7.2c

### Focus questions

- How can students' contributions be seen as moving the mathematics forward?
- What is the teacher doing to establish an environment that encourages mathematical reasoning? What else might the teacher do?

7.3a

### Video workshop agenda

- Before viewing: Set the context for the video
- While viewing: View the video with the focus questions in mind
- After viewing: Discuss the focus questions

7.4a



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## Video workshop

- Focus questions:
  - What conjectures do students share related to the problem?
  - How do students justify their conjectures (logic, language, representations, etc.)?
  - What teaching moves are being used to support students' engagement in reasoning or the mathematical practices?
- Keep in mind that the focus of video workshops is on the teaching, not the teacher.

7.4b

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  - How did viewing,
- Analyzing that supp
  - What we students practices
- Building
  - Did the c What typ

In this session

- Considere
  - Develop
  - Make the
- Engaged
  - Noticing
  - Identifyir with reas
  - Learning

ding the process: Improving the process briefing	
briefing	
ch step of the video workshop process (i.e., set up,	
scussion) work today?	
teaching and learning: Teaching moves t mathematical reasoning	
you able to notice in your groups related to supporting ngagement in explaining or other mathematical	
roductive norms: Focusing on teaching	
versation tend to focus on teach <b>ing</b> or the teach <b>er</b> ? of comments help focus the conversation on	
7.5a	
Summary	
you:	
ways to follow up on explanations that:	
e mathematics further	
ontributions accessible for all students	
a video workshop with a focus on:  Judents' conjectures	
teaching moves used to support students' engagement	
ning and/or mathematical practices debrief the process to improve subsequent video	
7.6a	
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