

# **Talk It Out! Mathematically Productive Discussions in the Primary Classroom**

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# Why encourage classroom discussion?



[http://www.math.harvard.edu/~knill/mathmovies/swf/inthenavy\\_28.html](http://www.math.harvard.edu/~knill/mathmovies/swf/inthenavy_28.html)

# My students are talking—now what?

We will explore teaching practices that enable primary students to

***participate in productive mathematic discussions***

while encouraging students to

***build collective understanding of content.***



# It takes one to know one...

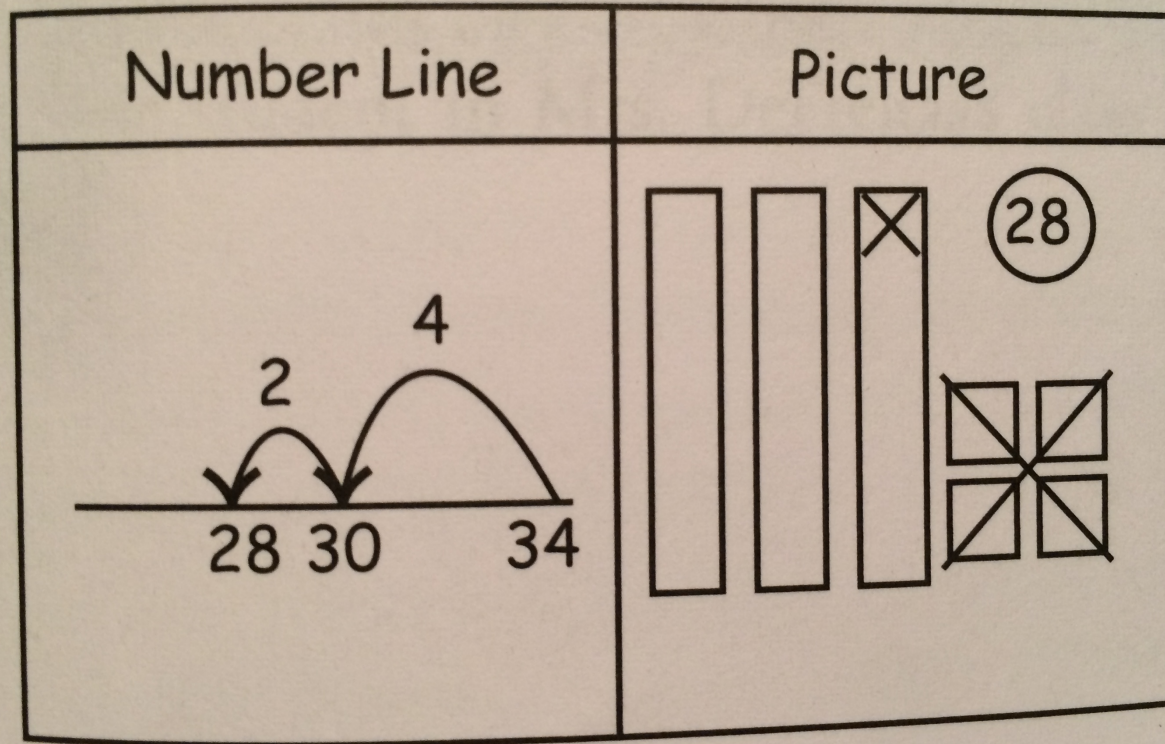


## Time to think like a 2<sup>nd</sup> grader!

$$34 - 6$$

# What actual 2<sup>nd</sup> graders have to say...

$$34 - 6 = 28$$



- What is the **teacher** doing to promote a productive math discussion?
- What are the **students** doing to promote a productive math discussion?



# Talk Moves

✧ Re-voicing

✧ Repeating

✧ Reasoning

✧ Adding-On

✧ Waiting

✧ Turn and Talk



# Orchestrating Productive Discourse

- **Anticipating** likely student responses to challenging mathematical tasks
- **Monitoring** students' responses to the tasks (while students work on tasks in pairs or small group)
- **Selecting** particular students to present their mathematical work during the whole class discussion
- **Sequencing** the student responses that will be displayed in a specific order
- **Connecting** different students' responses and connecting the responses of key mathematical ideas

## NCTM Research Brief:

### Strategies for Facilitating Productive Classroom Discussions

- Attend to the **classroom culture**
- Choose high-level mathematics **tasks**
- Anticipate **strategies** that students might use to solve the tasks and monitor their work
- Allow student **thinking** to shape discussions
- Examine and plan **questions**
- Be strategic about “**telling**” new information
- Explore incorrect solutions
- **Select** and **sequence** the ideas to be shared in the discussion
- Use Teacher **Discourse Moves** to move the mathematics forward
- Draw **connections** and summarize the discussion

<b>Teacher</b>	<b>Strategies for Productive Classroom Discussions</b>	<b>Students</b>
	<b>Classroom Culture</b>	
	<b>Tasks</b>	
	<b>Strategies</b>	
	<b>Thinking</b>	
	<b>Questions</b>	
	<b>“Telling”</b>	
	<b>Incorrect Solutions</b>	
	<b>Select &amp; Sequence</b>	
	<b>Discourse Moves</b>	
	<b>Connections</b>	



# Books Worth Looking Into...

