Talk in Math Class? You Bet!

Welcome!

- **Uniquely You:** Introduce yourselves at your tables and find three things (outside the education world) that you share.
- Be prepared to share one thing with the whole group.

Photo Courtesy of TJ Jemison

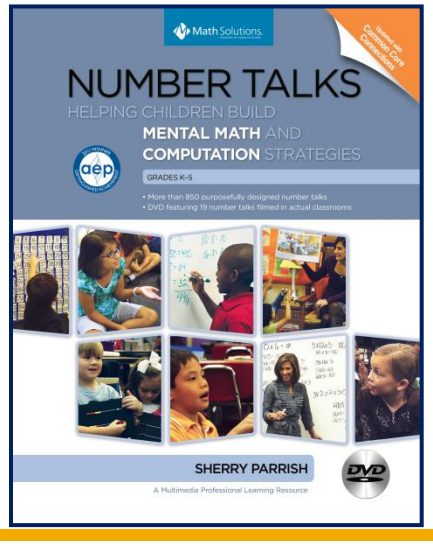
Why Math Talk™?

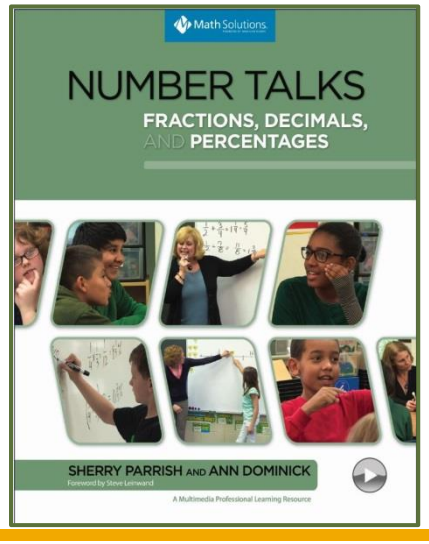
- Talk can reveal understanding and misunderstanding.
- Talk supports robust learning by boosting memory.
- Talk supports deeper reasoning.
- Talk supports language development.
- Talk supports development of social skills.

Number Talks

During the session, you will…

- Participate in number talks
- Analyze classroom video
- Consider how to implement and use number talks as part of math instruction in your schools and classrooms





Dr. Sherry Parrish, Author

Why Number Talks?

Current standards expect that students will be able to:

- Construct viable arguments and critique the reasoning of others
- Compute efficiently, flexibly, and accurately

Why Number Talks?

$$\begin{array}{r} 13 \\ -\ 7 \\ \hline 6 \end{array}$$

Computation Strategies

- Efficiency
  - –The ability to choose an appropriate, expedient strategy
- Flexibility
  - –The ability to use number relationships with ease in computation
- Accuracy
  - –The ability to produce an accurate answer

Key Components of Number Talks

- Classroom environment and community
- Classroom discussions
- The teacher's role
- The role of mental math
- Purposeful computation problems

Compute Mentally

70 - 34

Classroom Video: 70-34

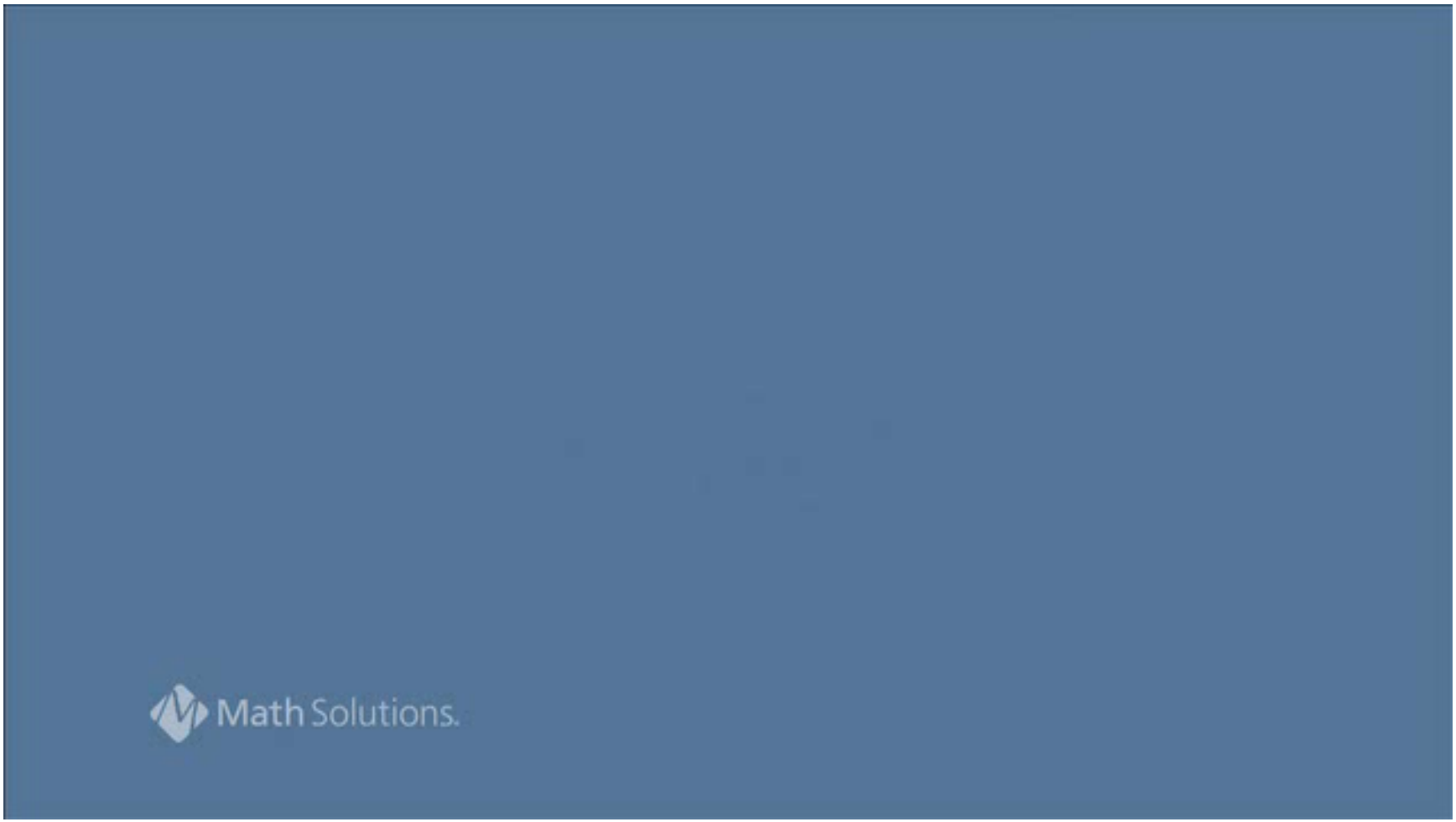
A How are students using number relationships to solve the problem?

B How would you describe the classroom community and environment?

C Which strategies demonstrate accuracy, efficiency, and flexibility?

D How are the students' strategies similar to or different form your strategy?

Classroom Video: 70-34



Subtraction 70-34 from Number Talks: Helping Children Build Mental Math and Computation Strategies by Sherry Parrish (Sausalito: Math Solutions, 2010)

Classroom Video: 70-34

A How are students using number relationships to solve the problem?

B How would you describe the classroom community and environment?

C Which strategies demonstrate accuracy, efficiency, and flexibility?

D How are the students' strategies similar to or different form your strategy?

Four Procedures and Expectations

1. Select a designated location.
2. Provide appropriate wait time for most students to access the problem.
3. Accept, respect, and consider all answers.
4. Encourage student communication.

Sample Response Prompts

- I agree with _____ because _____.
- I do not understand_____. Can you explain this again?
- I disagree with _____ because_____.
- How did you decide_____?
- I am thinking about this problem differently. Here is the way I solved it:_____.
- My way is different from_____. Instead of____, I_____.
- Can you explain the difference between _____and _____?

Compute Mentally

32 X 15

Video Focus

A How does the teacher facilitate the classroom discussion?

B What conditions are present that foster a safe learning community?

C How is student communication encouraged and valued?

D How would you describe the teacher's role during the number talk?

5.2 Multiplication 32 x 15 from Number Talks: Helping Children Build Mental Math and Computation Strategies by Sherry Parrish (Sausalito: Math Solutions, 2010)

Video Focus

A How does the teacher facilitate the classroom discussion?

B What conditions are present that foster a safe learning community?

C How is student communication encouraged and valued?

D How would you describe the teacher's role during the number talk?

Facilitating the Classroom Discussion

The teacher…

- Asks questions
- Uses wait time effectively
- Sustains a community in which students feel empowered to arrive at answers

Conditions Fostering a Safe Learning Community

- Student use of appropriate non-verbal signals
- Teacher use of wait time
- No judgment of student responses
- All answers and strategies accepted for consideration

Encouraging Student Communication

The teacher…

- Repeatedly asks, “Who has another way?”
- Makes student thinking public through scribing
- Revoices students’ strategies

Purposeful Computation Problems

- 20 x 4
  19 x 4

- 30 x 3
  29 x 3

- 40 x 6
  39 x 6

- 49 x 2

- 39 x 5
  65 – 18
  148 + 324

Implementing Number Talks

- What interests you about number talks?
- What steps will you take to implement number talks in your schools or classrooms?
- What support will you need to implement number talks?

Dr. Sherry Parrish

Presentation PDF

Talk in Math Class? You Bet!

http://mathsolutions.com/contact-us/speaker-presentations/

Please Provide Session Feedback

Pick One:

- Paper (2 in bag)
- MSC App
- QR Code
- http://tinyurl.com/MSC16eval

#ModelSchools