

Mathematical Practice Virtual Professional Development Series

Math Practice 2: Reason Abstractly and Quantitatively Facilitation Guide

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Intended Use

The facilitation guide is intended to be used by educators when viewing the voice over recording of Math Practice 2: Reason Abstractly and Quantitatively. Districts and schools are encouraged to use this resource as part of a professional development series that spans all 8 Standards for Mathematical Practice.

Viewing the recordings of the Math Practice sessions can be done in any order. Viewing the recording is encouraged to be done in groups, but it can be done individually. To get the full benefit of the professional development series, educators should engage in the tasks and participate in local discussions on the Mathematical Practice.

Reproducing the Facilitation Guide

If you would like to make copies of any portion of this facilitation guide or accompanying PowerPoint presentation, please credit the Ohio Department of Education.

During Facilitation: Discussion Questions

Pause the recording at the times indicated below to discuss each question.

Discussion Question

PowerPoint Slide 9: Jam Board Activity

1. What comes to your mind when you think about MP 2: Reason Abstractly and Quantitatively?

Discussion Questions

PowerPoint Slide 10: Looking at Tasks That Promote MP 2

1. What do you notice?
2. What do you wonder?
3. What commonalities are evident across the tasks?
4. What are the differences across the tasks?
5. Where in the task are their opportunities for students to show their understanding of MP 2?

Discussion Questions

PowerPoint Slide 25: Exploring Resources for MP 2

1. What do you think of when MP 2?
2. What do you think Math Practice 2: Reason Abstractly and Quantitatively means or looks like at your grade level/course?

Resource Links

Ohio Department of Education Documents

- [Standards for Mathematical Practice](#)
- [Kindergarten - Grade 5](#)
- [Grades 6-8](#)
- [High School](#)

University of Arizona Progressions

- [Standards for Mathematical Practice: Commentary and Elaborations for K-5](#)
- [Standards for Mathematical Practice: Commentary and Elaborations for 6-8](#)

Other National Resources

- [Inside Mathematics](#)
- [Illustrative Mathematics](#)
- [Robert Kaplinsky: Math CCSS Math Practices Readable](#)

References

Illustrative Mathematics. (2014, February 12). Standards for Mathematical Practice: Commentary and Elaborations for K–5. Tucson, AZ.

Illustrative Mathematics. (2014, May 6). Standards for Mathematical Practice: Commentary and Elaborations for 6–8. Tucson, AZ.

Koestler, C., Felton-Koestler, M. D., Bieda, K., & Otten, S. (2013). *Connecting the NCTM process standards and the CCSSM practices*. Reston, VA: The National Council of Teachers of Mathematics.

O'Connell, S., & SanGiovanni, J. (2013). *Putting the practices into action: Implementing the common core standards for mathematical practice, K-8*. Portsmouth, NH: Heinemann.

Conversation Notes: