

## Overview of Session 7

- Analyzing a task and narrating the construction of a representation in the task
- Improving the use of public recording space

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## Affordances of tasks

- Mathematical
- Representational
- Teaching
- Learning

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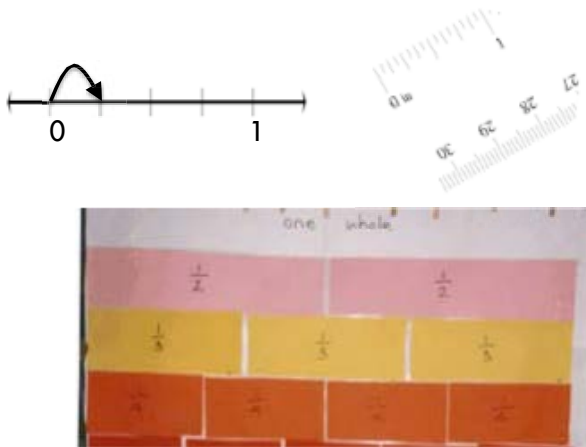
## Task analysis questions

- What do you notice about the mathematics of the problem/set of problems?
- How do you anticipate students will solve the problems (strategies) and what their solution(s) would be?
- If you were teaching using this problem, what representation(s) would you use and how would you narrate its use?

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## A fractions-of-a-length task

Which is longer  $\frac{3}{8}$  of an inch or  $\frac{7}{16}$  of an inch?

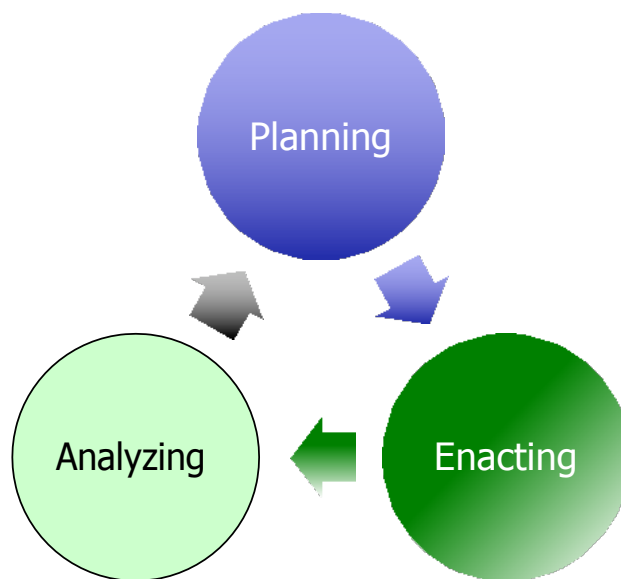


- What do you notice about the mathematics of the problem?
- How do you anticipate students will solve the problems (strategies) and what their solution(s) would be?
- If you were teaching using this problem, what representation(s) would you use and how would you narrate its use?

## Narrating the construction and use of a representation

- Make clear the mathematical problem or context.
- Describe how a particular representation is useful for the problem at hand.
- Construct the representation and use it to solve the task, while describing and giving meaning to each step.
- Summarize what the representation has helped to do.

## Cycle of learning from the use of public recording space



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## Debriefing the use of the “board”

- Provide lesson context
- Use the images of public recording space as you discuss what happened during the enactment of your plans for the board
- Note:
  - **Student thinking:** e.g., what students recorded, where you tried to record student thinking
  - **Mathematics:** e.g., were the mathematical points clearly represented?
  - **Teaching practice:** e.g., what connections were made or could have been made?

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## Using and studying the use of the public recording space

What aspects of the use of the board and examining your practice were:

- Relatively easy to incorporate into your work?
- More difficult to do before, during, or after teaching the lesson?
- Informative in terms of learning about student thinking, mathematics, or teaching?



## Summary

In this session you:

- Engaged in two processes, task analysis and studying the use of public recording space, that can be used in an ongoing way to learn from and improve teaching
- Used mathematics and student thinking as essential considerations in teaching practice (considering tasks, selecting representations, narrating) and learning from teaching

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