Intervention: Moving Beyond Remediation

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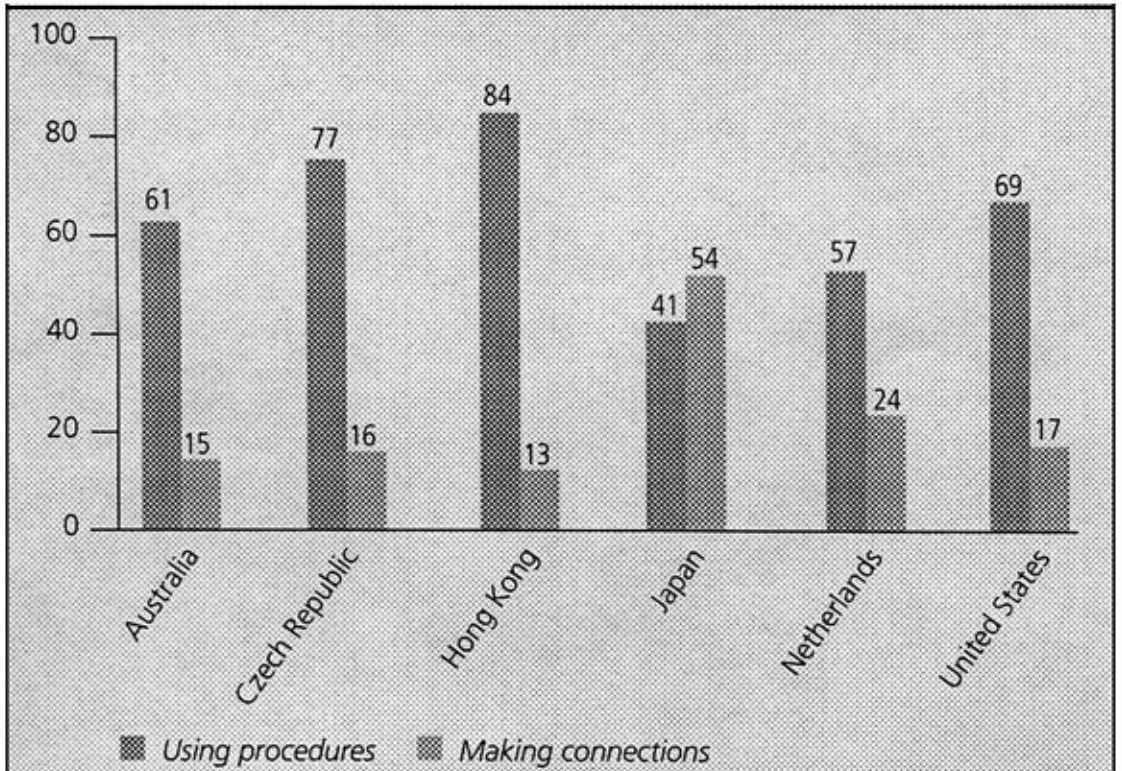
What is a typical math intervention lesson at your school?

TIMSS Video Study

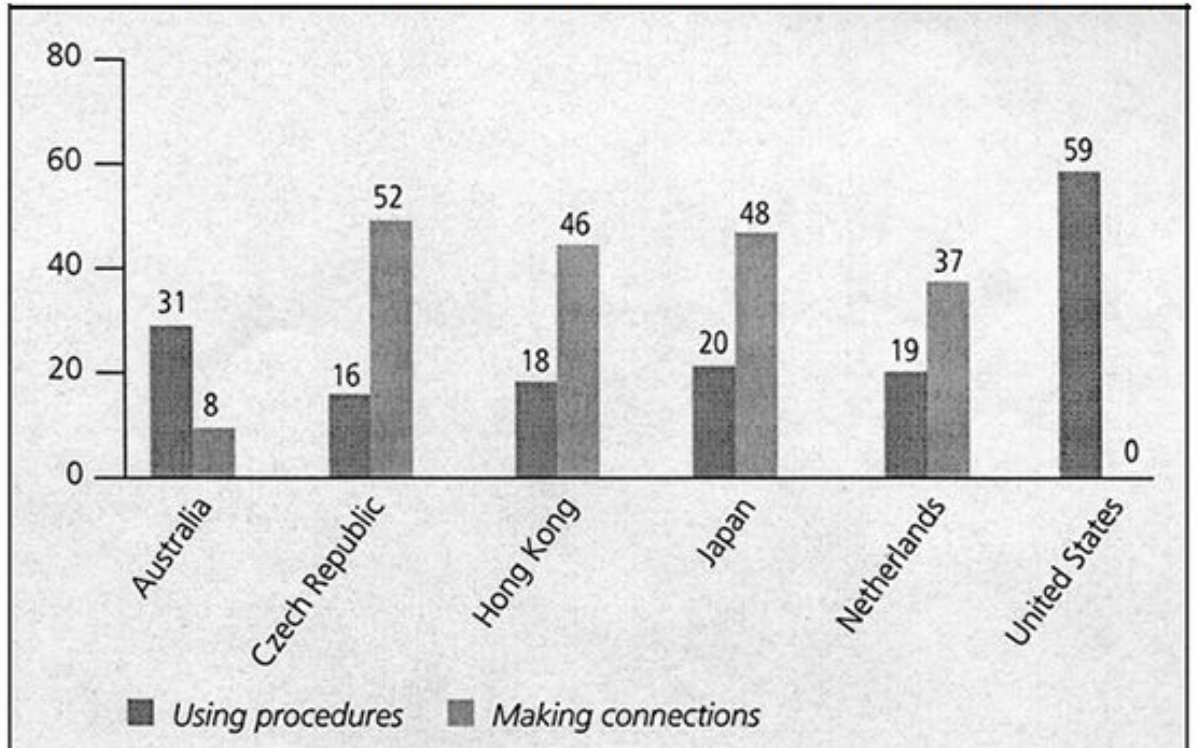
Figure 1. Types of Math Problems Presented



The percentage of math problems that focused on *making connections* varied greatly among high-scoring TIMSS countries.

Note: Switzerland was not included in this analysis because this feature of teaching was coded only by English speakers and English transcripts of the Swiss lessons were not available.

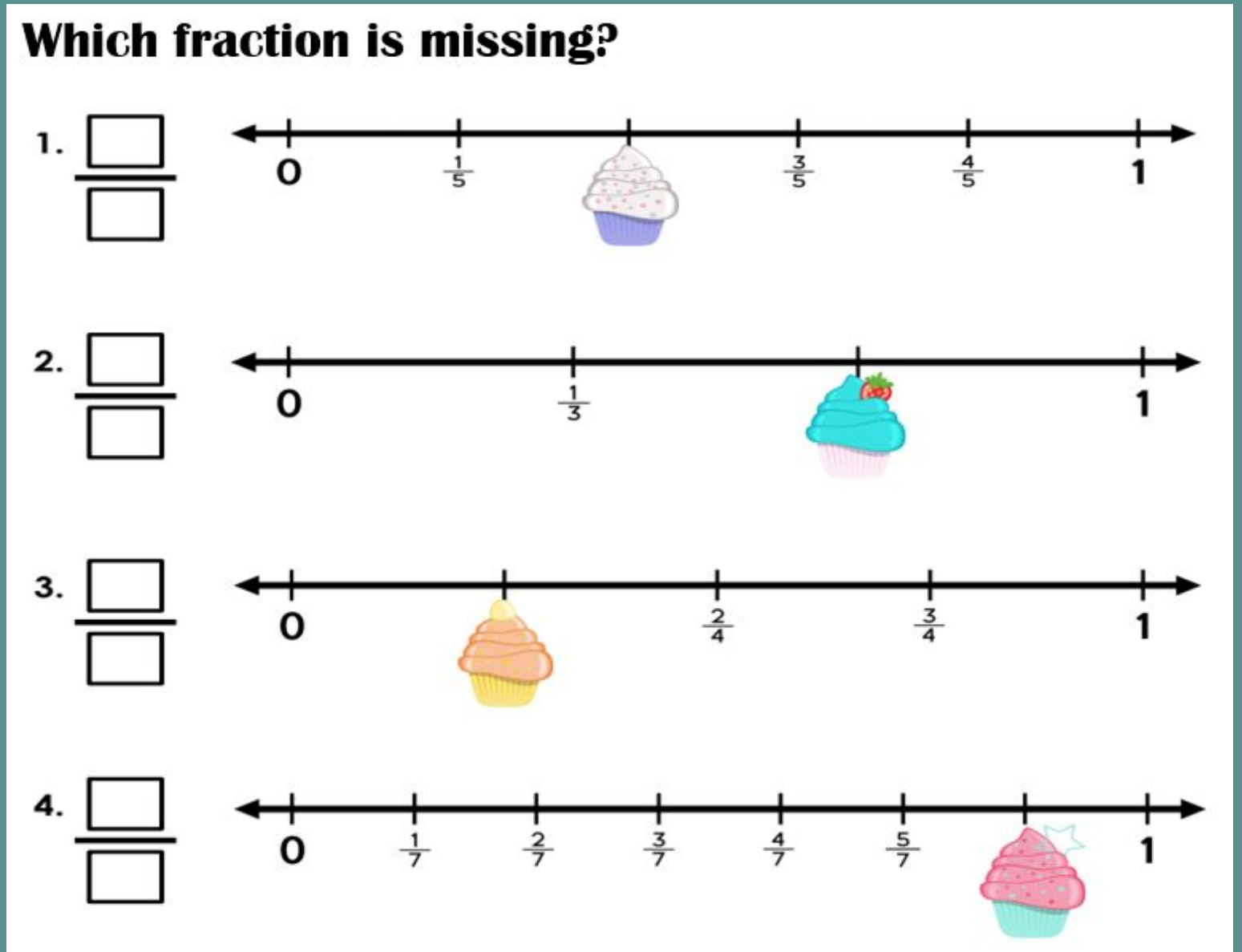
Figure 2. How Teachers Implemented *Making Connections* Math Problems

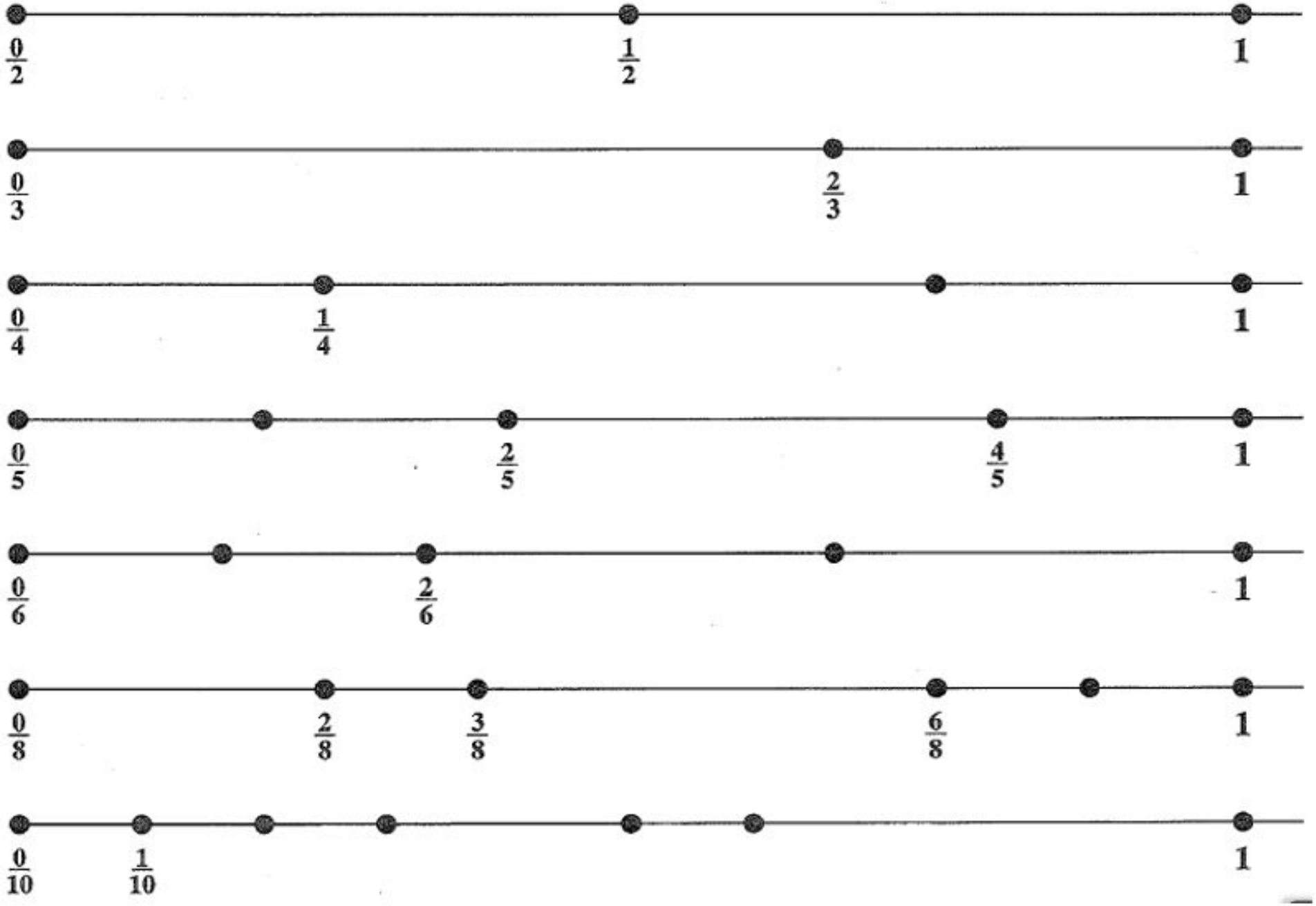


High-scoring TIMSS countries implemented a higher percentage of *making connections* problems as *making connections* problems. U.S. teachers tended to turn these problems into procedural exercises.

Note: Switzerland was not included in this analysis because this feature of teaching was coded only by English speakers and English transcripts of the Swiss lessons were not available.

Let's Explore Some Tasks!

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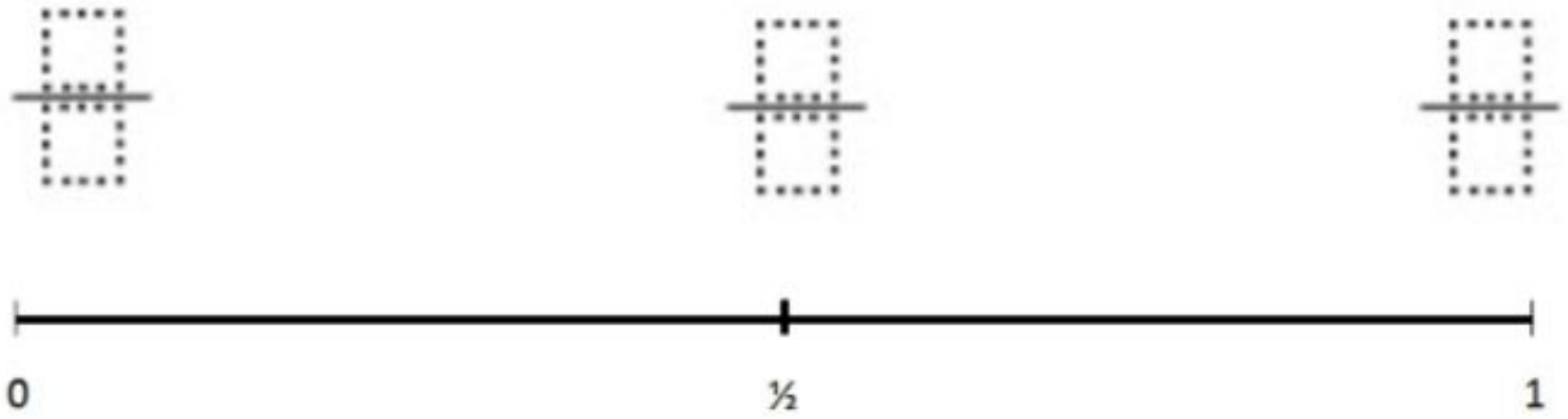
1

Directions: Use the digits 1 to 9, no more than once, to create three fractions that are as close to zero, one half and one as possible. NOTE: Close as possible is measured by adding up all the differences and making it the least possible value.



Proficiency Building

Put on your student hat.

Work in groups of 4 and create partner teams.

One partner team uses a Sage and Scribe cooperative structure to practice your operation of choice.

The other partner team works together to solve the challenge for the same operation.

Proficiency Building

Switch to your teacher hat and discuss:

- How might you use one of these tasks in an intervention group?
- What are potential benefits of either of these tasks?

Sorting Word Problems

Put on your student hat and work in groups of 3.

- Read each problem. Discuss how it might be solved.
- Sort the problems into 1 of these 4 categories:
  Addition Subtraction Multiplication Division

Sorting Word Problems

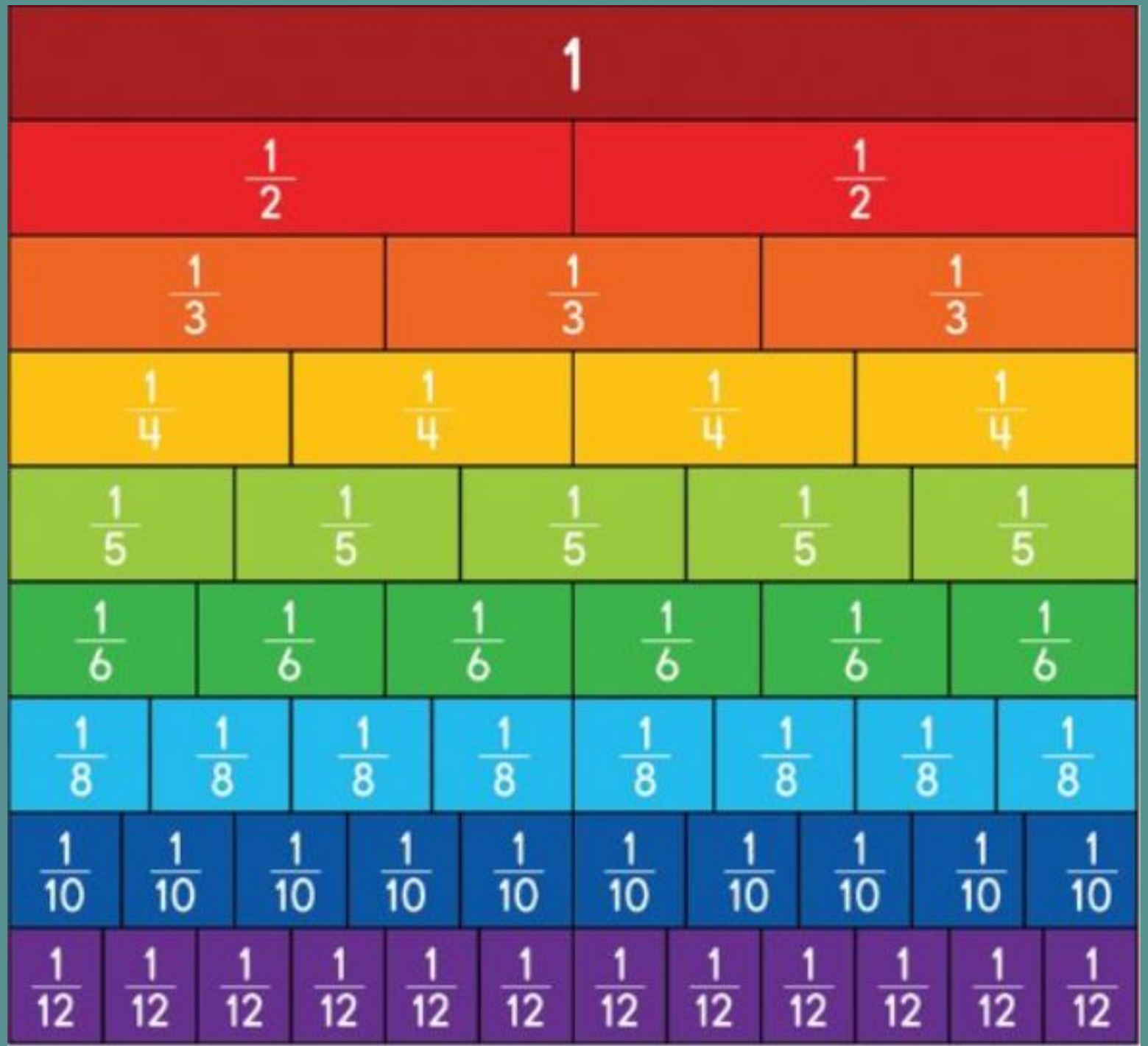
Switch to your teacher hat and discuss:

- As you observe students sorting word problems, what data might you collect?
- What questions might you ask to provide “just in time” scaffolding?

Discovery Task

Chef's Issues

For a large batch of chicken noodle soup $2\frac{1}{2}$ cups of noodles is not enough, but $2\frac{2}{3}$ is too much. Find one amount of noodles that can be used.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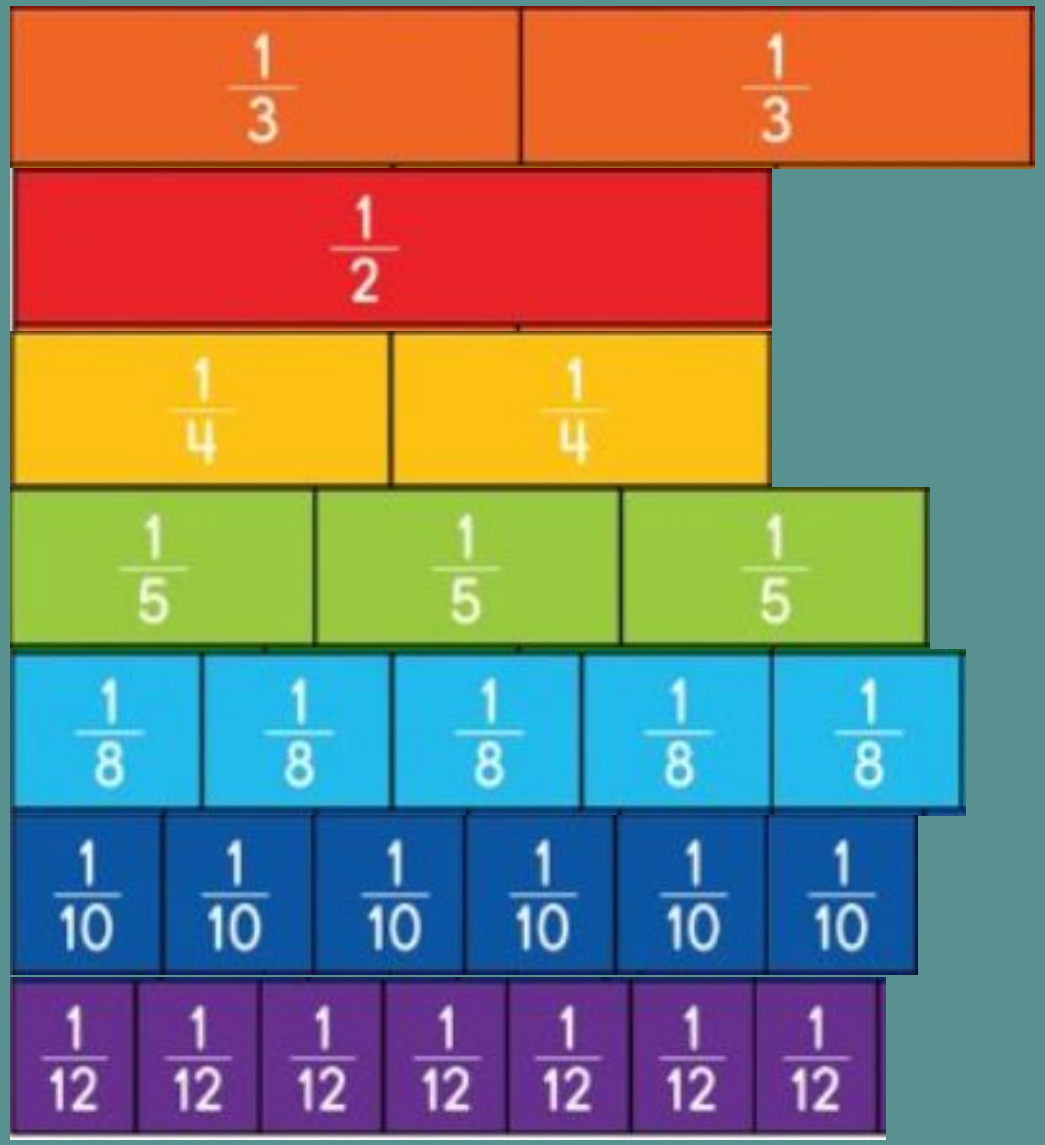
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What is one thing that all of these tasks have in common?

Reflecting on Practice

What are some practices you might change during intervention time as a result of our experiences today?

Thank You for Coming!

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"Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding." William Paul Thurston