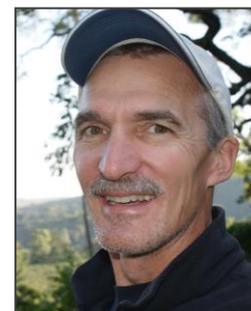




Author Panel Talk



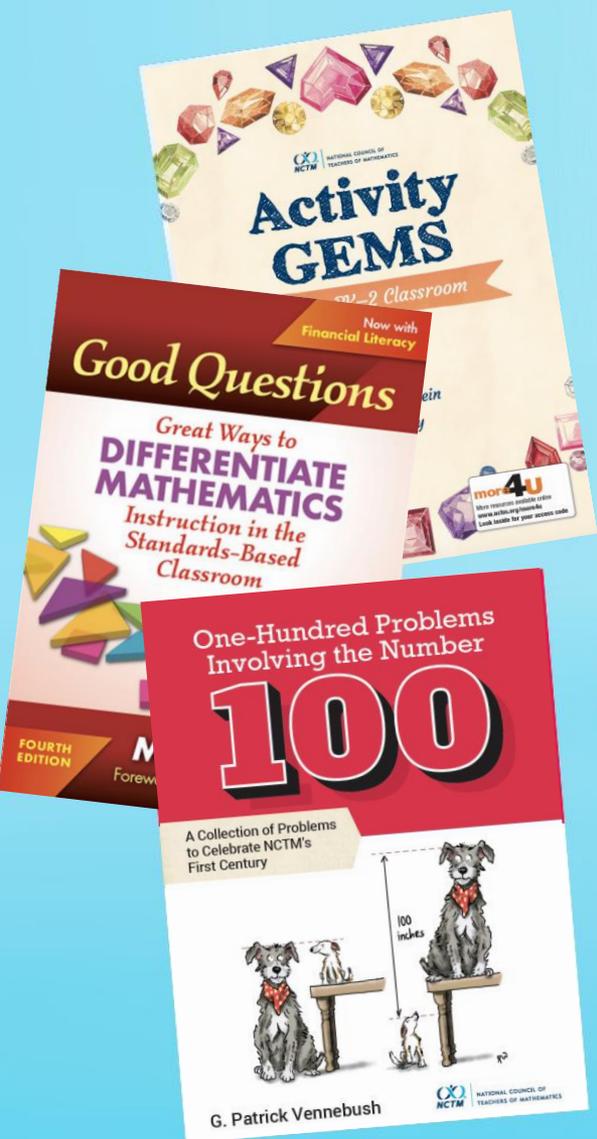
Marian
Small



Roger
Day



Patrick
Vennebush

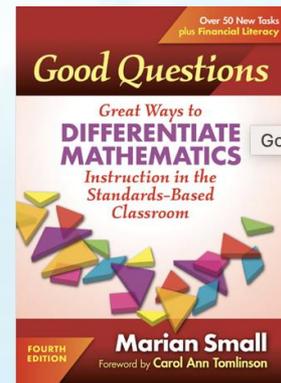


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Good Questions: Great Ways to Differentiate Instruction

Marian Small
October 2020





A Question for You

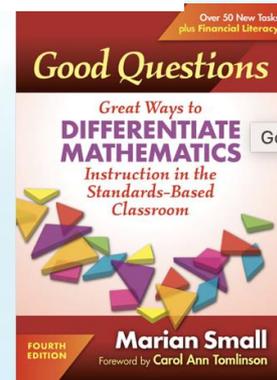
Choose a number for the second mark on the **number line**.



Mark a third point on the line. Tell what number name it should have and why.

Counting & Cardinality: Kindergarten
Number & Operations in Base Ten: Grades 1, 2

BIG IDEA: 1.5
PRACTICE STANDARD: 3

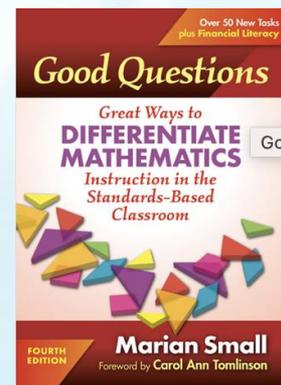




Is it a Rich Task Yet?

What do I have to do to make it rich?

Inevitably—it's about asking more, and thoughtful, questions.





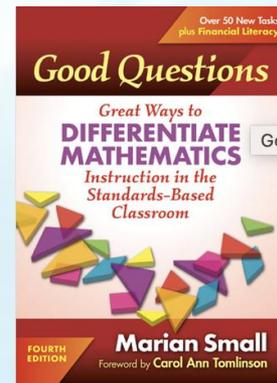
Is it a Rich task yet?

- How big could the value at the new mark be?
- How little?

Choose a number for the second mark on the **number line**.



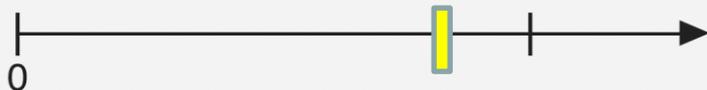
Mark a third point on the line. Tell what number name it should have and why.



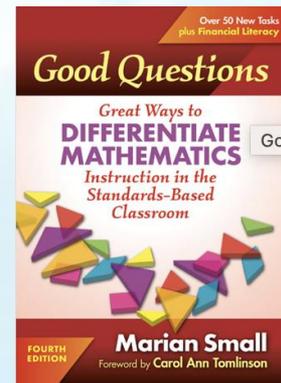
Is it a Rich task yet?

- What if the mark you inserted were at 8?
- What's the value at the mark already there?

Choose a number for the second mark on the **number line**.



Mark a third point on the line. Tell what number name it should have and why.



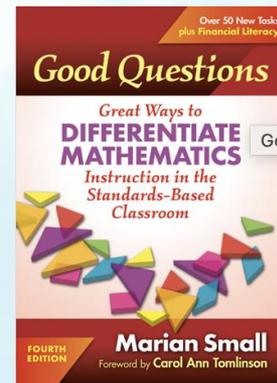


Is it a Rich task yet?

Choose a number for the second mark on the **number line**.



Mark a third point on the line. Tell what number name it should have and why.



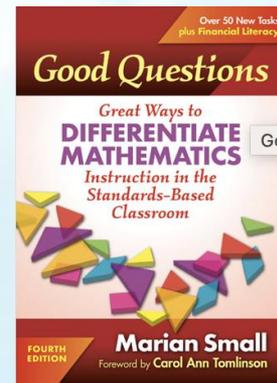


Is it a Rich task yet?

Choose a number for the second mark on the **number line**.



Mark a third point on the line. Tell what number name it should have and why.

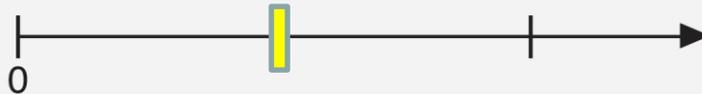




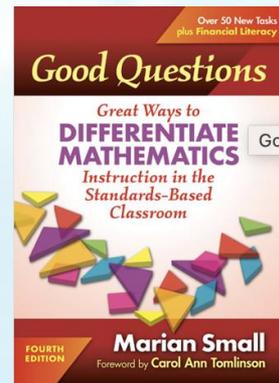
Is it a Rich task yet?

- Could one number be a fraction and one a whole number?
- Could both be decimals? Irrationals?

Choose a number for the second mark on the **number line**.



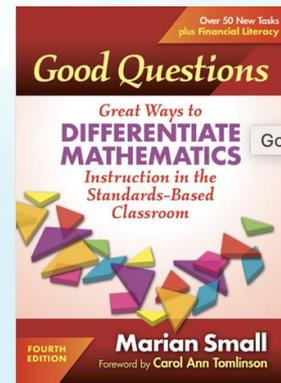
Mark a third point on the line. Tell what number name it should have and why.





My Premise

- It's the questions you ask that make a task rich—not the task itself.
- I would agree, though, that some tasks have more potential to be rich.
- Often, they are open questions.





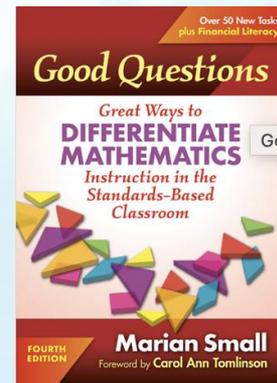
A Question for You

Exactly three sides of a shape are equal in length. What could the shape look like? How do you know?

Geometry: Grades 3, 5

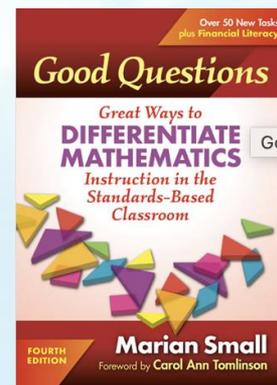
BIG IDEAS: 9.2, 9.3

PRACTICE STANDARDS: 1, 5, 6



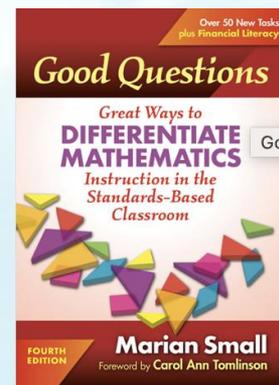
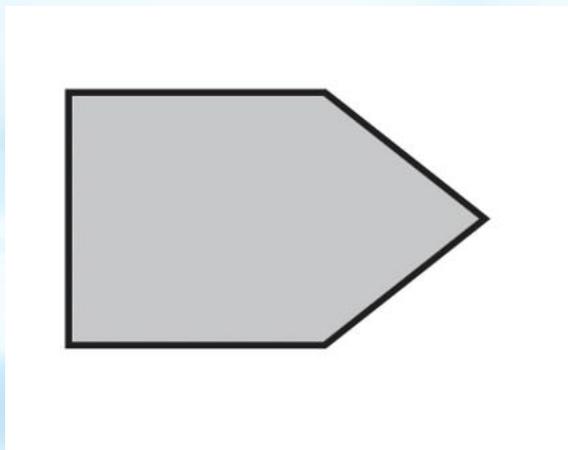


A Question for You





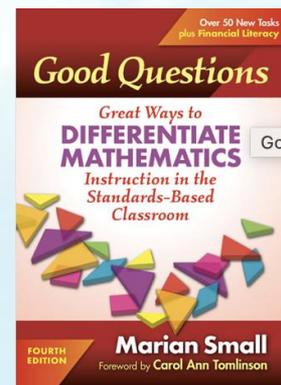
A Question for You





A Question for You

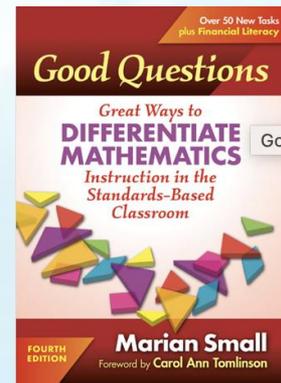
- We saw shapes with 3 sides, 5 sides, 8 sides.
- What other numbers of sides are possible?





The Nature of the book

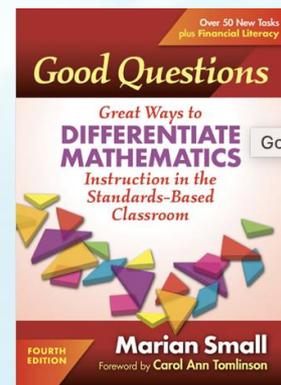
- Fourth edition, including financial literacy
- Focuses on both open questions and parallel tasks for K-8, with over 300 examples
- Discusses why these are great ways to differentiate instruction





The Nature of the book

- Each question is linked to a big idea.
- Each question is linked to typical state standards.





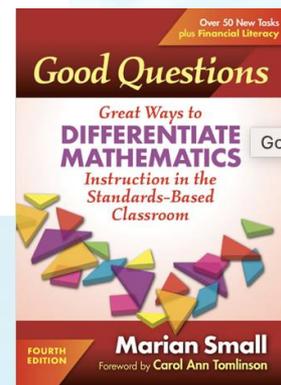
Examples of Big Ideas

THE BIG IDEAS FOR NUMBER & OPERATIONS—FRACTIONS

In order to differentiate instruction in fractions, it is important to have a sense of the bigger ideas that students need to learn. A focus on these big ideas, rather than on very tight standards, allows for better differentiation.

It is possible to structure all learning in the topics covered in this chapter around these big ideas, or essential understandings:

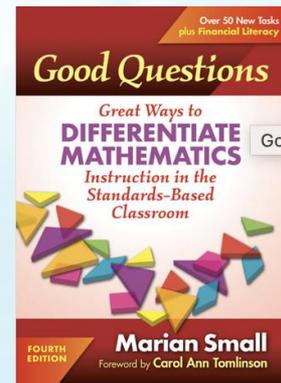
- 2.1. Representing a fraction or decimal in an alternate way might reveal something different about that number and might make it easier to compare with other fractions or decimals.
- 2.2. Fractions and decimals are useful for describing numbers that fall between whole numbers.
- 2.3. When a fraction or decimal is used to describe part of a whole, the whole must be known.
- 2.4. There are various strategies for comparing fractions.
- 2.5. Operations have the same meaning with fractions as they do with whole numbers.





Another Question for You

You multiply two integers. The result is about 50 less than one of them. What might the two integers be?

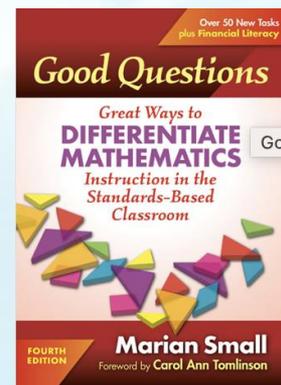




But Then What?

- Did anyone multiply two negatives?
- Did there have to be a negative?
- Could one number be “super negative”, e.g., -100 ?

You multiply two integers. The result is about 50 less than one of them. What might the two integers be?

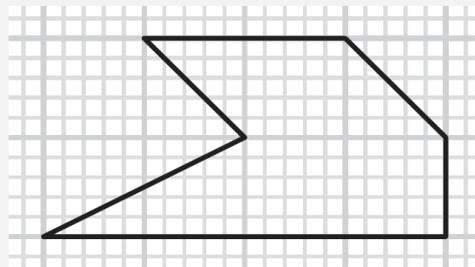




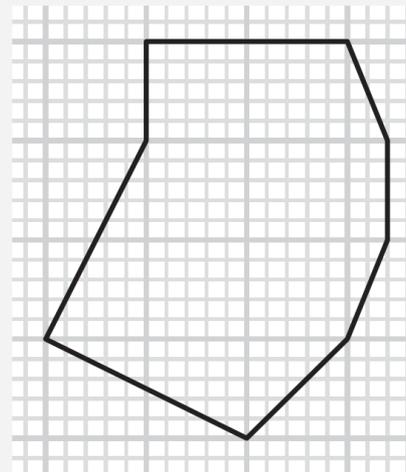
Example of a Parallel Task

What is the area of this object?
How did you figure it out?

Choice 1:

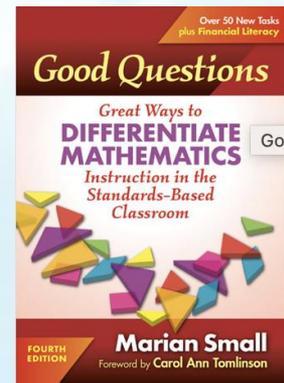


Choice 2:



Measurement & Data: Grade 4

BIG IDEA: 8.5
PRACTICE STANDARDS: 5, 6

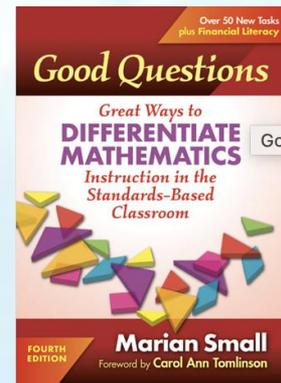




Example of a Parallel Task

Questions that suit both groups include:

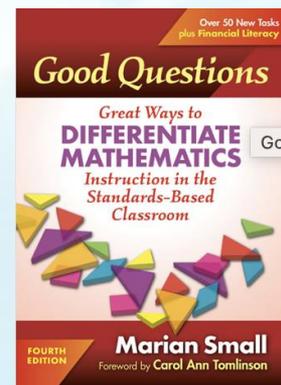
- *What unit did you use for area? Did you have a choice?*
- *How did breaking up your shape help you figure out the area?*
- *How might thinking about fractions of a shape have helped you figure out your area?*





Most Important to Me...

- Is to realize that when you borrow a task, it's just the beginning.
- It's up to you to make it rich.
- Now let me turn it over to Roger.
- I'll be back later with some thoughts about Roger's and Patrick's tasks.





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Thoughts about Roger's Task



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Thoughts about Patrick's Task