The teacher has 4 pancakes to share equally among 6 children. How much pancake does each child get?

Write a question you might pose to Joy:

Joy (Grade 4)
Imagine that you are Joy’s teacher and you want to have a one-on-one conversation with her. Describe some ways you might respond to her work on this problem, and explain why you chose those responses.

Ms. Reed’s Anticipated Conversation

1. Can you tell me what you did?
   *(To understand the thinking behind the work)*
2. Why did you split the first 3 pancakes into 4 pieces?
   *(To understand the rationale, to see if she saw the relationship with the people.)*
3. Tell me about the last pancake.
   *(I want to see what she was thinking when she split this pancake.)*
4. You wrote here 1/24. Can you show me 1/24 in the picture?
5. How do you know that is 1/24?
   *(What thinking was behind this decision to split the pieces? What understanding does she have about it?)*
6. Do you know how much the kids will get altogether? *(Can she add her pieces?)*
7. Is it more than 1/2 or less?
8. More than 1 or less?
9. Is there another way to split the pancakes?
   *(Does she see the connection now?)*

Ms. Ward’s Anticipated Conversation

1. I would ask Joy if there was another way she could share [4] pancakes with [6] children.
   *(She may have started with fourths without thinking about the outcome, so I would like to see if she could do thirds or halves.)*
2. I would ask her if
   
   \[
   \frac{1}{4} + \frac{1}{4} + \frac{1}{8} + \frac{1}{24} \]
   would be the most efficient way to share pancakes or if she could find a way to cut bigger servings.
   *(I know she understands equivalency so I would like to see what she [more efficiently] comes up with.)*

Describe in detail what you think Joy did in response to this problem.

Ms. Reed’s Strategy Description

Joy drew her 4 pancakes and cut them into 1/4’s. I believe she did that because she is comfortable with 1/4’s. When she reached her last pancake she realized 1/4’s wouldn’t get each person a pancake piece. I think she then divided it into 1/8’s. Again, I think the 1/4’s and 1/8’s are comfortable for her. After she numbered 6 she realized she had 2 pieces left so she divided the last 2 1/8’s into 6 pieces. I believe she counted the pieces as if thirds were in each 1/8 to come up with twenty-fourths.

Ms. Ward’s Strategy Description

Joy drew 4 pancakes first, then automatically cut them into fourths. She may feel comfortable with fourths? She knew the last one could be cut into sixths except for 1 fourth would be cut into twenty-fourths. She understands equivalence but cannot notate her thinking yet!
<table>
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<tr>
<th>Question Categories to explore details of the child’s existing strategy</th>
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<tr>
<td><strong>PROCESS</strong>&lt;br&gt;Pressing the child for an explanation of specific parts of his/her problem-solving process</td>
<td>Teacher requests that the child explain or justify specific strategy steps that are mathematically important or points at which the child exhibited uncertainty in the problem-solving process.</td>
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<td><strong>REPRESENTATION</strong>&lt;br&gt;Linking the child’s representation and the story context</td>
<td>Teacher asks the child to link his or her representation back to the story context or to link the story context to his or her representation.</td>
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**Divine**<br>Divine had 12 giant chocolate bars to share with the kids on her soccer team. She wants to give each person $\frac{3}{4}$ of a bar of chocolate. How many kids will she be able to give chocolate to before she runs out?

**Rosie - Try It On!**<br>It takes $\frac{1}{5}$ of a gallon of paint to paint one doghouse. How many doghouses can you paint with $4 \frac{3}{5}$ gallons of paint?

So how many kids get chocolate? (16) How do you know 16? What are you doing for that?

So, all those 3 fourths together make 12 chocolate bars? (yes) Prove that to me—how could you convince me?

Where are the 12 chocolate bars in your picture?

So, when you circle those three 1 fourths of a chocolate bar, what does that mean in the story?

For more Question Categories, see:

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