

Is it a Half?

Brief description of focus of video: This is a 2.5-minute clip. We see two girls working together on a sorting activity where they are to determine whether or not certain shaded rectangles represent $\frac{1}{2}$ or not. A classroom researcher is working with them, asking questions. The clip starts near the beginning of their work together (after place 6 cards) and they have some misconceptions about what $\frac{1}{2}$ means.

CLIP 1: Is it a half?

[The two students and researcher are looking at a paper split in half with one side saying “Half” and one side saying “Not a half.” There are smaller papers with different numbers of boxes shaded in on each side of the line.]

00:05

G1: Nope. Nope. Not even. No.

00:05

R: Do you guys want to...can you explain why when you say it's not a half?

G1: If it's a half, it would be like equal parts of the one you just saw.

G2: *[pointing to one of the cards on the side labeled “Half”]* 1, 2, ...

G1: It has to be the same size as this one *[pointing to sheet of paper under “Half” side]*

R: It has to be the same size as that one on each side?



G1 and G2: Yeah.

00:25

R: So, this one's a little more obvious, right? Can you explain why that's not a half maybe you want to do?

G1: That's not a half because it has to go all the way or else it's just covering the whole thing.

G2: Well, could it be like, could it cover this side too...to be a half too?

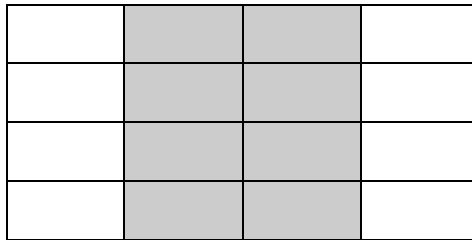
G1: Yeah.

R: Okay, so you guys agree if it covered either of those ways it would be a half?

G1: Because that's 6 and that's 6 [*points to a paper under the "not a half" column*]

00:49

R: Oh that's interesting. Okay, so what about this one? [*points to the first card in the "not a half" column, recreated here*] If you don't mind me asking about this one here.



G1: That's not it because these two have to be together.

[*G1 points to two columns of un-shaded blocks on the sheet of paper and motions they should be next to each other.*]

R: Okay, would you say...so, could you possibly say that because...

G1: Because half has only 2 sides, that has 3 sides.

01:10

R: Ohhh, that's a really interesting idea: half has to have 2 sides, but not 3 sides. That's really interesting. So in math...it's a little...I see what you're saying because things like half moon that you talked about, you can't have the middle slice. In math, you can have half of something if it just equals half of the area.

01:30

G1: Yeah.

G2: Ohhhh.

R: So, it doesn't matter. So, let's slow down just a little. So, it doesn't matter if it's exactly two sides, but if it's half of the area. So let's look at this one.

[R points to the paper on top of the "Not a half" column]

R: And let's decide...we have to argue either it's not half of the area, or it is half of the area. Because just saying it's not split in two sides doesn't convince us yet. Okay? So...

G1: *[pointing to the sheet of paper]* Well, it has to be like that. It has to be the same as these two but they're still not.

01:59

R: Still not what? You're saying that they're...

G1: Still not the half.

R: Still not the half? Can you tell me about the area though? Because that's going to be the most important part.

G1: Area, well, they do have the same area.

R: What has the same area?

G1: These white ones. *[points to un-shaded regions on either side of shaded block in the center of paper]*

G2: They have to be...*[inaudible]*

R: Okay, so you're saying that...so what has the same area?

G2: Umm.. these two have the same area *[pointing to shaded blocks]* but these don't *[pointing to un-shaded blocks]*. So that's why it's not equal.

02:25

G1: They have to be together *[pointing at white, un-shaded regions]*.

R: They have to be together. Okay, so we need to, I need to find a piece of paper or something.

02:32