

## Half of a Whole

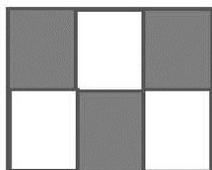
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Grade: 3

1 *Javier:* He said it was like 5 times bigger than the...

2 *Teacher:* Tell me whether or not this (*Figure showing  $\frac{3}{6}$* ) shows me halves.



[d]

3 *Mayah:* It doesn't show you halves.

4 *Teacher:* Prove it.

5 *Mayah:* It doesn't show you halves ...

6 *Teacher:* I say it does. Prove it to me.

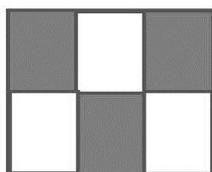
7 *Mayah:* ...Because...

8 *Teacher:* Well, prove me wrong.

9 *Javier:* 2. It shows you 2. It's 2.

10 [*Crosstalk*]

11 *Mayah:* It doesn't show you halves because one is—because one is not shaded. Three are  
12 shaded in this, but then there are 3 that are not shaded. (*Student points to three*  
13 *white parts and three shaded parts.*)



[d]

14 *Teacher:* Oh, so you're telling me that 3 are shaded. I want you to convince them now,  
15 because you saw it. So now I want you to get them to see what you saw, that this  
16 is half. Okay? If you need to cut it up, cut it up. Don't be afraid to cut it up. Okay?

*Teacher leaves to monitor other small groups and returns in 2 minutes.*

17 *Teacher:* When I left here, you were held accountable for what you were saying. You had to  
 18 prove to your group that that was a half. Okay?

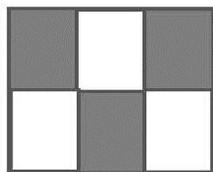
19 *Zaria:* I only proved it to them two. I didn't prove it to him because he didn't \_\_\_\_.

20 *Teacher:* Okay.ayah, show me why that's a half. All right. Who can tell me what Zaria  
 21 was talking about before I left? Yes?

22 *Hensley:* She was talking about how it was half, but...

23 *Teacher:* Show me the shape. Show me the shape. Okay.

24 *Hensley:* But this one was half. *(Student holds up figure showing  $\frac{3}{6}$ .)*



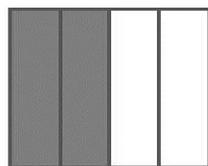
[d]

25 *Teacher:* Okay.

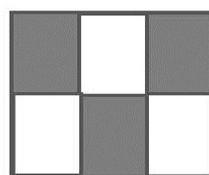
26 *Hensley:* But we didn't think so, so she said, do you think it's more than 3 or less than 3?  
 27 It's half. And then we said less than 3. So she was trying to tell us how it was half,  
 28 but we didn't believe what she said.

29 *Teacher:* You still don't believe her?ayah, why don't you believe her?

30 *ayah:* I kind of don't believe her, because how—let me see this. Because of how there are 3  
 31 shaded, but there's not 1 only shaded, like this one. *(Student points to the 3 shaded*  
 32 *on the figure showing  $\frac{3}{6}$  and then compares the figure to a figure showing  $\frac{2}{4}$ .)*



[a]



[d]

33 *Teacher:* Okay.

34 *ayah:* But I know that it is equal, because 3 are shaded and 3 are not.

35 *Teacher:* Oh, so you know it's equal because 3 are shaded and 3 are not shaded? So we  
 36 have an equal number that is shaded and an equal number that is not shaded?  
 37 Okay. Can you write me a fraction for that? Everyone, write me a fraction for this.

38 *Mayah:* (Writes  $\frac{3}{6}$  on the paper.)

*Teacher leaves to monitor other small groups and returns in 3 minutes.*

39 *Mayah:* (The student has cut up three shaded pieces and rearranged them to look like  
 40 figure e.) This is—this is equal to half because like this is the same thing. This is  
 41 the same exact same thing, because we have 3 that are shaded that look just like  
 42 this, and 3 on the bottom that are not shaded that look just like this.



[e]

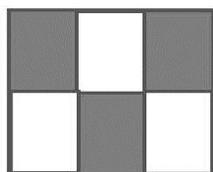
43 *Teacher:* Okay. Hensley, where's your shape like that? Hensley, do you agree that that's a half?

44 *Hensley:* Yes. That's a half.

45 *Teacher:* Okay. Mayah, now prove to him that this is the same as this. (Teacher points to  $\frac{3}{6}$   
 46 and  $\frac{1}{2}$ .)

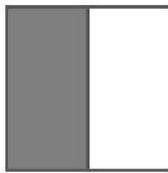
47 *Mayah:* Hensley, look, this is the same as this, but it's just into pieces. And this one's not  
 48 into pieces. See, there's...what...there's 3 ones on the bottom, but this one  
 49 doesn't have 3 right at the bottom. It has 3 shaded at the top. This one doesn't  
 50 have 3 shaded at the top. It just has some straight big pieces, which is all into one.

51 *Hensley:* But still, but we cut it up diff- like, processes, because like, because this one was  
 52 here before, so... (Student moves the thirds around to show the original figure.)

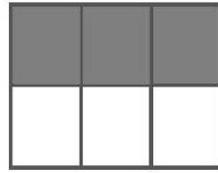


[d]

53 *Javier:* Yeah, but then we cut it up, and then this...and then this was equivalent to this  
 54 one, because this is how I know it fits, because if you go like this with them...  
 55 (*Student puts each of the three sixths on top of  $\frac{1}{2}$ .*)



[e]



56 *Teacher:* Why don't you do the same? (*Hensley cuts out the shaded sixths.*)

57 *Javier:* First, the 3 shaded, on the part that's shaded, at the top.

58 *Teacher:* Okay. Don't move so fast for him. Hensley? Tell him again.

59 *Javier:* You put...so this is...this here is one half, but then if you put the 3 pieces here,  
 60 then it'll fit in the shaded part, the shaded part.

61 *Mayah:* But Hensley was saying that you could put 2 of these in here like that. That's what  
 62 Hensley said at first. But I told him we have to use all of our shapes.

63 *Teacher:* What makes it half?

64 *Hensley:* Because like these pieces, like if you put this together, if you put these together, it  
 65 will be half when you put the shaded parts on the other one. And then if you put  
 66 these on this one.

67 *Teacher:* Okay.

68 *[End of Audio]*