class

Parent Tape: Fraction as Number: An

Introduction
Date: 1993-09-20

Location: Colts Neck Elementary School Researcher: Professor Carolyn Maher Transcriber(s): Yankelewitz, Dina

Verifier(s): Yedman, Madeline Date Transcribed: Spring 2009

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1.0.244	T/R 1:	Okay. Make up a problem for me. At your table, with your partner, make up a problem for me and the rest of the class. I only want one problem to make up, we are gonna go around and hear your problems. See if you can trick somebody else. Make up a problem.
1.0.245	Alan:	Two yellows.
1.0.246	T/R 1:	Just one problem you and your partner make together.
1.0.247	Alan:	No, let's make it harder.
1.0.248	T/R 1:	See if you can trick me, or trick Amy.
1.0.249	Alan:	Yeah, look at this.
1.0.250	T/R 1:	Or your teacher, see if you can trick us. And if, if, if you and your partner may have made up, or your partners, have made a problem, when you think you have one, be careful how you're gonna ask it, practice how you're gonna ask the problem and then raise your hand.
1.0.251	Erik:	[Erik puts five red rods next to an orange rod.] Hm, hm, hm, hm.
1.0.252	Alan:	No, that's one fifth.
1.0.253	Erik:	I know.
1.0.254	Alan:	Oh, yeah. [He starts to set up Erik's problem.] We're out of reds. We're out of reds. Oh, well.
1.0.255	T/R 1:	Try to get a hard one and try to stump us. [Alan raises his hand.]
1.0.256	Erik:	Yes, I got it. [He puts two purple rods next to the orange rod.]
1.0.257	Alan:	No, those won't make it.
1.0.258	Erik:	What makes thirds?

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1.0.259	Alan:	Thirds, thirds out of a, thirds out of this? [He is pointing to an orange rod.] Probably the greens.
1.0.260	Erik:	Light green.
1.0.261	Alan:	Light green would make thirds out of the orange. [Alan puts light green rods next to the orange rod.]
1.0.262	Erik:	Yeah.
1.0.263	Alan:	No, it wouldn't.
1.0.264	Erik:	Yeah, it would.
1.0.265	Alan:	No, it doesn't. Try it.
1.0.266	Erik:	Then what does?
1.0.267	Alan:	I know what makes thirds.
1.0.268	Erik:	What?
1.0.269	Alan:	There's got to be one.
1.0.270	T/R 1:	[T/R 1 approaches their desks.] Oh, this is an interesting one. [She points to the orange rod with five red rods next to it.]
1.0.271	Erik:	[To T/R 1] Which one makes thirds? What makes
1.0.272	T/R 1:	[To Alan] This would be an interesting problem, what would you ask me here, Alan?
1.0.273	Alan:	If, if the red rod was considered one fifth, what
1.0.274	T/R 1:	Or if the orange rod is considered, if the red rod is one fifth, what would the orange rod be?
1.0.275	Alan:	Mmm-hmm.

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1.0.276	T/R 1:	Good problem, that is a good one to ask. Okay, good problem.
1.0.277	Erik:	No, but what makes it?
1.0.278	Alan:	Nothing can divide twelve into thirds except
1.0.279	Erik:	Red.
1.0.280	Alan:	No. [He counts on the five red rods next to the orange rod] Two, four, six eight, ten. Ten divided into thirds. No, ten can't be divided into thirds.
1.0.281	Erik:	But nine can.
1.0.282	Alan:	Nine can, but there is no nine rod. Oh, yeah there is.
1.0.283	Erik:	Eleven, this is twelve though. [Alan holds up the orange rod.]
1.0.284	Alan:	No, it isn't, look [Alan counts on the five red rods next to the orange rod] Two, four, six, eight, ten. The orange rod is ten.
1.0.285	Erik:	Okay, ten. So that's ten, this must be nine. [He holds up a blue rod.] And this divided into thirds must be
1.0.286	Alan:	It takes green.
1.0.287	Erik:	Light green.
1.0.288	Alan:	It takes green to divided the orange into thirds.
1.0.289	Erik:	Blue. [the "nine" Alan is referring to]
1.0.290	Alan:	No, we are doing this one. I'm doing this one, the one I made up.
1.0.291	Erik:	[Simultaneously] I'm doing this one. [ the three light green and blue model]. Yeah.

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1.0.292	T/R 1:	Okay. I'm ready to hear some questions because you can maybe keep thinking of more.
1.0.293	Alan:	I got one.
1.0.294	T/R 1:	Are you all ready to listen to the questions
1.0.295	Erik:	Oh, mine is hard.
1.0.296	T/R 1:	And hopefully we'll get around
1.0.297	Erik:	No one will get mine.
1.0.298	T/R 1:	And if we don't finish you can finish tomorrow, try to remember what you've done. Okay, are you all ready to listen. Okay, Alan has one for us, I'd like to hear Alan's. Alan you want to come up here and ask us, and build it again?
1.0.299	Alan:	If one red rod was considered one fifth, what would a whole be considered?
1.0.300	T/R 1:	Okay, do you understand the question? One more time, ask the question. That's really a hard question.
1.0.301	Alan:	If the red rod would be one fifth, what would one, what would one be? [Alan gestures to Graham to respond.]
1.0.302	Erik:	Me?
1.0.303	T/R 1:	If the red rod was one fifth, what would we call one?
1.0.304	Graham:	The orange rod.
1.0.305	Alan:	Mmm-hmm.
1.0.306	T/R 1:	Nice and loud, Erik.

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1.0.307 Erik: No, he called on Graham.
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1.0.308 Graham: The orange rod.

1.0.309 T/R 1: Oh, Graham.

1.0.310 Graham: The orange rod.

1.0.311 T/R 1: Can you prove it?

1.0.312 Graham: Five red ones make up an orange rod.

1.0.313 T/R 1: Okay, what do you think? How many of you agree with that? That

was a hard one. If I call the red one one fifth, what would I call the orange? Okay Graham, you didn't let him stump you. Okay, Beth has one for us. You want to come up here Beth? And Mark has one right after that, so why don't you come up too, Mark, and you can

both ask together and help each other find them.

1.0.314 Beth: If the, if the green was a whole, what would a blue be?

1.0.315 T/R 1: Did you all hear the question? Okay, Beth says that if she calls the

green rod one, what would, what number name, the light green rod one? Is that, alright, thank you. Mark says that if we call the light green rod one, what number name will we give to blue? That was

the question.

1.0.316 Beth: Erik.

1.0.317 Erik: Three wholes.

1.0.318 T/R 1: Nice and loud Erik.

1.0.319 Erik: Three wholes.

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1.0.320	T/R 1:	Just three. Give it the number name three. Okay? Umm, can you prove it? [Beth puts a blue rod and a light green rod on the transparency] I think we don't have enough light green.
1.0.321	Erik:	Oh, I have some light greens.
1.0.322	T/R 1:	Umm, you, right, we have to imagine it. Can you imagine it?
1.0.323	Alan:	Transparent.
1.0.324	T/R 1:	And try it on your seat? Yeah.
1.0.325	Alan:	Transparent ones.
1.0.326	T/R 1:	We don't have any for the overhead in light green. Could you build it on your desk and believe it? Do you all believe it? Laura?
1.0.327	Erik:	I built it on my desk.
1.0.328	T/R 1:	You built it on your desk? Ah, because Mark has another one to ask you, go ahead Mark.
1.0.329	Mark:	If, if the blue was one whole, what would the green be considered?
1.0.330	T/R 1:	Light green, right?
1.0.331	Mark:	Yes. [Points to Jacquelyn to answer]
1.0.332	Jacquelyn:	One third.
1.0.333	T/R 1:	Why?
1.0.334	Jacquelyn:	Because, umm, these, if, the, if you, an, put them up to the side there'll be three and you put a one and it'll be one third.
1.0.335	T/R 1:	Okay, very nice, thank you Mark. Who has another one? A hard one?

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1.0.336	Erik:	Oh, I have a hard one.
1.0.337	T/R 1:	A really, really hard one. I think, I think Jacquelyn and Kelly have a hard one. Do you have different ones or the same one? Okay, why don't you both come up. Try to stump us now. Uh oh, a hard one.
1.0.338	Jacquelyn	: If the white one was one whole, what would, um, the orange be?
1.0.339	T/R 1:	If we call the white rod one, what number name would we give to the orange?
1.0.340	Jacquelyn	: Erik.
1.0.341	Erik:	Ten wholes, or ten.
1.0.342	T/R 1:	And, and how would you, how would you convince me?
1.0.343	Erik:	Well, if you took the orange block, you'd, and you took white ones, you'd need just only ten, well.
1.0.344	T/R 1:	I have one for you. If I call the orange rod one, what number name would I give to the white rod? Oh, Michael has his hand up. Whisper it to me Michael. [Michael whispers the answer to T/R 1, then Meredith whispers answer to T/R 1] You people have the number names for it. You understand the question, if I'm calling the orange rod one, what number name would I give to the white rod?
1.0.345	Erik:	Oh, I know it, I know it. I know it, I know it.
1.0.346	T/R 1:	If you know it, raise your hand. Okay, Jacquelyn, you tell us.
1.0.347	Jacquelyn	: One tenth.
1.0.348	T/R 1:	How many think one tenth? Why one tenth? Jacquelyn.

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1.0.360

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1.0.349	Jacquelyn:	Because if you line them up on the side and add them all up it will be ten.
1.0.350	T/R 1:	So if you add up one tenth, up, how many times would you be adding one tenth?
1.0.351	Jacquelyn:	Ten times.
1.0.352	T/R 1:	Ten times? Is that true, Sarah, is that what you were gonna say? Okay, wow, what a, what a smart class.
1.0.353	Erik:	I have a hard one.
1.0.354	T/R 1:	You have a real hard one, Erik? Let's hear from Meredith and then we'll hear from you, because Meredith gave me one before, I said no that'll take us probably a week. We only have a few minutes.
1.0.355	Meredith:	If you, if I called purple, is this purple? If I called purple a half, if I called the purple a half, what would a whole be?
1.0.356	T/R 1:	Okay, if purple were one half, what would one be?
1.0.357	Amy:	Umm, a brown.
1.0.358	T/R 1:	What would you do to convince us? You're really getting to know these.
1.0.359	Amy:	I would take, I took, I tried it and I took a purple and tried to match up all the rods up to the purple and then I took another one, cause the brown, the look, the brown looked half, the purple looked half the other brown, so I took another purple and it was a whole.
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T/R 1: Okay, that's really great. Okay, you are really wonderful.