

<p>Description: Early Algebra Ideas Involving Two Variables: Clip 1 of 18, Open Sentences: True, False, Legal, Illegal</p> <p>Parent Tape: Early Algebra Ideas Involving Two Variables</p> <p>Date: 1993-09-30</p> <p>Location: Harding Elementary School</p> <p>Researcher: Robert B. Davis</p>	<p>Transcriber(s): Spang, Kathleen</p> <p>Verifier(s): Yedman, Madeline</p> <p>Date Transcribed: Fall 2010</p> <p>Page: 1 of 3</p>
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Davis Hum, instead of using this method [{ }] that I was using, let's use this method to keep track.

Brian I have a question. Shouldn't you make the square a triangle since the square and the triangle [inaudible].

Jeff I have a question. What if there is two triangles?

Brian Two times two plus one equals, there should be two triangles.

Jeff That is so stupid. Do they have to be the same? Can't you put a rectangle down and have it?

Davis Yeah.

Brian That should be.

Davis I urge you by and large not to use rectangles and circles. Some people use them but the circles look like zeros and if you are.

Jeff How about a hexagon? Can we use them? A pentagon?

Student One and three.

Jeff A octagon? [Davis is picked up on another camera: Careful the rectangles and the squares tend to look alike. Now suppose I put, so we can write the truth set this way. Davis writes the truth set in a table format, with the box in the left column and the triangle in the right column.]

AmyLynn Put a stop sign.

Davis Suppose I put zero in the box. What would I put in the triangle to make it true?

Milin One.

Student One.

Student One.

Student One.

Jeff One.

Davis So that, what this says is

Jeff There is no secret.

Davis That if you put zero in the box and one in the triangle, it would be true. This is the so called truth set again.

Jeff Is there a secret here?

Davis Well, there might be.

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Jeff Milin I have a question. If you know it, how can it be a secret?
 Yeah, if another person knows it too, how can it be a secret?
 Ankur Milin He is the only one in the world who knows.
 Yeah, but somebody else knows it.
 Jeff Your stupid little calculator watch can't bail him out on the stupid problem.
 Stephanie Davis Wait. No. I want to ask a question.
 Okay, sure.
 Stephanie How do you know like, is there a secret for every, like, if I put a square, a rectangle a triangle, if I put like, all of these different shapes, how do you know there is a secret for everything?
 Ankur Why did you have to ask that?
 Stephanie I just felt like it.
 Davis Can I get, can I get everybody's attention for a second. Stephanie says, how do you know there is a secret or not?
 Ankur You have to go through the problems and find out.
 Stephanie Yeah, but it could work. You can do like five different problems and it could work and you cannot do this one little problem then it wouldn't work on.
 Ankur Maybe just one. Maybe it just works on everything else but that one.
 Stephanie Yeah, but then it doesn't work then.
 Ankur Okay, what about the secret that we just figured out?
 That won't work on Milin's problem.
 Jeff Maybe we fixed it.
 Stephanie It might work in Milin's problem. We just didn't consider using half and fourths [inaudible].
 Milin It wouldn't work.
 Jeff Be quiet.
 Davis If I put one in the box, what do I have to put in the triangle to make it true?
 Milin Go ahead and try it.
 Student Three.

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Stephanie Oh God! not the watch.
Davis Suppose I put two in the box, what do I have to put in the triangle to make it true?

Student Five. I think it's five.
Jeff If he knows a secret, it's not a secret anymore. What are you doing?

Davis If I put three in the box, what do I have to put in the triangle?

Student Seven.
Jeff Seven, oh this is so easy. Four and nine.
Brian I know the secret.
Jeff So do I Brian. It's no big secret.
Brian It goes zero, one two three in the square and one, three, five and seven in the triangles.

Davis Here is what I want to do.
AmyLynn Four and nine. Maybe not. Anyone would work.
Jeff Amy you are so lost. It's not even funny.
Davis I want to tell you the truth but I want to tell you the truth set and I want you to tell what the equation is here. Okay.
Do you understand what we are going to do?

Romina I don't have a pencil. Someone took my pencil.