RBD	You got another one, you got eight good heavens.
Student	We got eight too.
Jeff	OK, she has everything written down. Put it so the camera can see it.
Jeff and Michelle R	It's box times box minus box equals triangle.
RBD	That's wonderful.
Jeff	Good.
RBD	I didn't think you'd get that one.
Jeff	And it works every time. That was easy, once you get the basic one.
RBD	You've got nine.
Ankur	We've got another code.
RBD	OK, that's an interesting idea, Amy Lynn and Bobby would you come and sayyour thing to the camera? Why don't you talk this time?
Amy Lynn	Number nine.
RBD	OK, are you going to explain it?
Amy Lynn	OK, we had the zero times the zero and then plus zero and we got zero. Then we added one, so it's one times zero plus a half and we got a half. And then we did zero one two times zero plus two equals two. And then we did one two three, three times zero plus four and a half equals four and a half. And then you took four times zero plus eight equals eight. And then five times zero plus twelve and a half equals twelve and a half. Six times zero plus eighteen equals eighteen.
RBD	I think it would be worth thinking about that some more and see if you can find an easier way to deal with all of that. Where do you suppose those halves are coming from, what do you suppose is making those halves appear in that problem?
Amy Lynn	Uh, the whole.
RBD	Yeah, I think so. OK, keep thinking about it because I think you can do more.
RBD	OK, all four of you are coming to explain this right?
Jeff	What number are you explaining?
Michelle I	Number eight. Romina you have the best hand-writing.
RBD	You need to show Roger which one you want him to be getting.
Michelle I	This one right here.
Romina	Oh, I have to talk. You can talk this time.
Michelle I	Fine, I'll talk I don't care, we'll both talk it doesn't make a difference. OK, I don't know how to explain it.
Ankur	You divide the triangle by the square, so you just divide the triangle by the square, then we wrote it like a code. So, six divided by three is two.

Michelle I	Tone it down some?
Ankur	Oh, her ears are hurting. So you divide twenty by five and that's four, thirty by six that's five, twelve by four that's three.
Brian	But do this, you multiply six times five plus zero because zero was the first number up in the triangle.
Ankur	So on the board like its square times square it's square times, like when you divide twelve by four that number goes in the second place.
RBD	Now why don't you take that triangle number and divide it by the box number what do I get? What do I get at that point?
Ankur	You get the answer.
RBD	What answer?
Brian	You see that's…
RBD	So here, I would take the six and divide it by three.
Brian	Get two.
RBD	What's the two?
Brian	You see three goes into six two times, and if you set it up like this three times two plus zero, you get six and that's that number, I didn't put the triangle in.
RBD	OK, that's an interesting idea.
Brian	We have it, it's triangle divided by square. But then we have to put times something
RBD	You tell me you get something, why don't you say equals and tell me what you get.
Brian	Divided it's not plus.
RBD	Let's see what we do here, let's try it. When I had here, zero divided by one is zero, and I had two divided by two that was one, and six divided by three that was two. Oh, I see something interesting is happening.
Brian	It goes up, like one, two, three, four, five, and you multiply six times five plus zero and you get that number.
RBD	OK, that's an interesting idea. I think that if you keep thinking about it you might find some other ways.
Brian	Let's find out number nine and then go back to it.
RBD	That's a very good idea.
RBD	You want to come and tell the camera, no, OK.
Michelle I	Could I go get a quick drink?
Jeff	This is the one for nine.
RBD	Who's doing the talking, you doing the talking?
Stephanie	Michelle [referring to Michelle R] figured it out.

RBD OK, then Michelle should do the talking. Let's try and get it where Roger can see it.

Michelle R You multiply the one times one and then subtract a half of one. And then you multiply two times two and then subtract half of two times two and then you get your answer, which is triangle. Three times three is nine and minus four and a half and that's your answer four and a half. It keeps going on.

RBD OK, we do need to talk about some of these I think. Let me talk to everybody OK? Well, I think you know what you said is right. OK, I won't tell them.

RBD OK, there is one thing that I would like to talk to you about, can I get a place to sit here. Notice there are different kinds of secrets, different people are making up, but this kind of thing which is called a formula, it's what mathematicians call a formula, that formula let's you if I tell you the number in the box, that let's you find what the number in the triangle is. OK, now some of you have some very interesting secretssaying don't use it, but some of you use something that depends on knowing what the number in the triangle is, but you see what we've got here doesn't. [On board is $(\square \times \square) + 1 = \Delta$]

RBD OK, it only depends on the number in the box; if I tell you the number in the box then you can find the number in the triangle. So we're particularly looking for formulas like this where you don't need to know the number in the triangle, all you need is to put the number in the box and that will tell you the number in the triangle.