Description: James summarizes and compares the Museum and Ladder

problems

Parent Tape: Early algebra, investigating

linear functions, Series 6 of 7

Date: 2005-12-15

Location: Hubbard School

Researcher: Professor Carolyn Maher

Transcriber(s): Baldev, Prashant Verifier(s): DeLeon, Christina Date Transcribed: Spring 2008

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| G3 Could you explain it to F | 3? |
|------------------------------|----|
|------------------------------|----|

R3 What is it?

G3 [to R3] Because James has this rule here [pointing to what James has written in the paper] for the ladders ... how many blocks? And this rule for how much

you spend in the museum problem and he is saying these two [pointing to the dollar rods] are the entrance fee.

What is really going on? You have a rule for computing the number of blocks, right?

Given a certain number of steps, right?

James [nodding]

R3 And you are saying what it is, what do you do, how do you compute? How do you

do? I see what you wrote. How should I understand this? What is it

saying? Steps what?

James Steps meaning ... the ladder times three plus two equals how many blocks in all?

R3 So?

R3

James So eaning ...

R3 Hmm, hmm. So like... Go ahead.

James If you are thinking about how many blocks it would take to make one step, then you

have like [starts to write]

R3 A ladder with one, right?

James [continues to write] ... times three and times, I mean plus two to equal five which is

equal to one step which is five.

R3 If I wanted for say for four.

James [writing] Four times three equals twelve then add two and that is fourteen.

R3 And that is what you got.

James [nods]

R3 OK. And you are saying what is this here? [pointing to something written by James]

What did you find here?

James And here you do the same thing but is a different meaning because each you trying to

find how much money you spend in a day.

R3 Hmm, Hmm.

James First meaning, this two equals two dollars is equal to how much you have to pay to

get in which is the entry fee. The three is how much it costs for each craft piece so you have to multiply how many craft pieces you want by

three and then add two to get how much you had to spend.

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R3 Hmm, Hmm. OK. So are you suggesting any connection between the problems? Are

they related, the problems? Are they related, the two problems, in some

way?

James Yeah.

R3 So how would you explain somebody the relation?

James The difference?

R3 The relation, how are they related ... the problems?

James Oh, oh. [reading from what he had written earlier] This is what I wrote. They are

alike because in the block problem you multiply the number of steps you pick times three and add two to find out how many blocks you want, how many blocks it is. In this problem, you multiply the number of craft pieces you want by three and add two to see how much money you need.

R3 Hmm.

James And that's how they are alike.

R3 But two here [pointing to a paper] is what, the entrance fee, right?

James No, that's block.

R3 Oh, Sorry, [now pointing to the rods] two here is entrance fee, right? And two here is

what?

James Blocks.

R3 [pointing to the Ladders problem] Three here is what?

James Huh?

R3 [pointing to the Museum problem] Three here is the price of items. What is three

there? [pointing to the Ladders problem]

James Three is like how many blocks you start off with to get one step [moving some rods

to partly make a ladder with one step] and then you add two more blocks to equal a whole step like when you come there is always space by here

and then you go up and have spaces over there