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| 00:46:10  Time Ankur Mike Jeff Romina Brian | Ankur asks for the next row as Jeff writes. | Watching Jeff. | Jeff creates three entries on the row of Pascal’s Triangle above, then asks what to explain next. | Listening. | Watching Jeff. |
| 00:46:50 | Watching. | Checks that Brian understands how nCr works. Jeff asks for guidance on how to explain next, and Michael recommends explaining their choice of generic nCr. | Jeff protests presenting all their work, but begins explaining that they have rewritten Pascal’s Triangle using nCr notation. Jeff presents how to go between a row of Pascal’s Triangle and nCr. | Watching. Romina points out work to Brian to discuss nCr. Jeff notes the majority of their work was spent on that work. | The researcher asks Jeff to review their work.  Brian agrees with the researcher that he’s a quick study. |
| 00:48:10 | Not visible. | Notes the formula Romina is discussing is n choose x. | At board. | Romina offers to point out their combinations to Brian. She explains their formula to calculate nCr, noting the denominator removes combinations they do not need. | Asks what the exclamation point is; the group replies factorial. |
| 00:49:00 | The researcher has Ankur repeat this is the reader’s digest version. | Michael and Ankur guide Jeff to add two terms. | Jeff ask for guidance again, and the researcher tells him to show the addition rule in general.  Time Ankur Mike Jeff Romina Brian | Watching Jeff. | “OK” to Romina’s explanation. |
| 00:49:30 | Researcher recommends that Ankur write on the side, but he continues discussing with Jeff. | Helps Jeff rewrite the formulaic addition. | Jeff adds at the board, and verifies with the group that his answer is correct. | Watching. | Watching. |
| 00:50:05 | Helps Jeff explain. | Helps Jeff explain. | Jeff explains again: pointing to nCx he notes it x gains one, and x+1 loses one. Michael and Ankur check him immediately, and he agrees the x+1 stays the same. Finally, they guide him to note the top becomes n+1 because there are more choices to be made. | Not visible. | Not visible. |
| 00:50:25 | Watching. | Thinks Brian follows their explanation. | Jeff explains by relating the problem to class. He notes that the rows are formed by adding the above terms, and begins explaining in terms of adding a pizza topping. | Succinctly explains that they are constructing Pascal’s Triangle via adding. | The researcher asks them to explain so Brian can follow.  Brian notes he can just watch from the back. |
| 00:50:55 | Watching. | Watching. | Jeff notes they are explaining why they add. Jeff notes when adding another topping, x becomes x+1, and if not gaining a topping, x+1 stays the same, so the two terms are added.  Time Ankur Mike Jeff Romina Brian | Watching. | Asks Jeff to continue explaining. |