

1. What is your name?

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2. Following is our definition of a *combination* of a finite set:

34-E. Definition of a *combination* of a finite set:

Given $A \in \{ \text{finite sets} \} \wedge n, r \in \omega \wedge r \leq n \wedge |A| = n,$
 $((A \text{ combination of } r \text{ on } A) = B \Leftrightarrow B \subseteq A \wedge |B| = r)$

- A. Is this definition compatible with your concept of a combination? Indicate your response by circling one of the following words:

Yes

"No"

- B. Write a paragraph that explains why you circled "Yes" or why you circled "No."

I circled yes because of what was mentioned in class about B being a subset of A. That means that all the "duplicates" created from a permutation would be eliminated. For example $\{\{1,2\}, \{2,1\}\}$ would actually be $\{\{1,2\}\}$. That elimination of "duplicates" would result in a set B with cardinality r. This was shown in class with the example $\binom{5}{2}$.

3. Smile.