1.   What is your name.

2.   Examine each of the following propositions to determine whether it is true or not; indicate your decision by circling either "T" or "F":

A. $A, B \in \{\text{sets}\} \Rightarrow A \subseteq A \times B$

T (F)

B. $\exists A, B \in \{\text{sets}\} \ni A \subseteq A \times B$

(T) F

C. $\exists A, B \in \{\text{sets}\} - \{\varnothing\} \ni A \subseteq A \times B$

T (F)

D. $\{ r : r \text{ is a relation on } \{0, 1\} \}$ contains exactly 16 elements

(T) F

Note from Jim w/r his response to Prompt #D above: Here are 16 subsets of $\{ r : r \text{ is a relation on } \{0, 1\} \}$:

$\varnothing$, $\{(0,0)\}$, $\{(0,1)\}$, $\{(1,0)\}$, $\{(1,1)\}$, $\{(0,0),(0,1)\}$, $\{(0,0),(1,0)\}$, $\{(0,0),(1,1)\}$, $\{(0,1),(1,0)\}$, $\{(0,1),(1,1)\}$, $\{(1,0),(1,1)\}$, $\{(0,0),(0,1),(1,0)\}$, $\{(0,0),(0,1),(1,1)\}$, $\{(0,0),(1,0),(1,1)\}$, $\{(0,1),(1,0),(1,1)\}$, $\{(0,0),(01,),(1,0),(1,1)\}$

Further note that one of the relations contains exactly 0 ordered pair, four of the relations contain exactly 1 ordered pair, six of the relations contain exactly 2 ordered pairs, and one of the relations contains exactly 4 ordered pair.

3.   Smile.