

QUIZ 5 FOR M325K

Name: _____
UT EID: _____

(1) Let  $A = \{\alpha, \beta\}$  and  $B = \{a, b\}$ . Find  $A \times B$ .

(2) Define the power set of  $A$ ,  $\mathcal{P}(A)$ .

(3) Let  $A = \{1, 2, 3\}$ . Find  $\mathcal{P}(A)$ .

(4) Define what it means for a collections of sets  $A_1, \dots, A_n$  to form a *partition* of a set  $B$ .

(5) Let  $A = \{1, 2, 3\}$ . Find all partitions of  $A$  that don't involve the empty set.