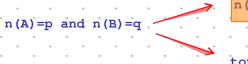
Tips and Tricks

Formula Tip: Total number of relations

The total number of relations that can be defined from a set A to a set B is the number of possible subsets of  $A \times B$ .



$$n(A x B) = pq$$

total # of relations



Visual Tip: In JEE Exams lots of questions are based on whether a relations is a function or not. To solve such questions, difference between them might help. It is given in the visual.

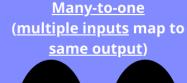
## <u>Relations</u>

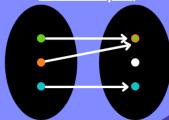
(Map each input to at least one output)



(Map each input to exactly one output)

One-to-one
(each input maps to
a distinct output)





## **Not functions**

(Map some inputs to multiple outputs)

