

Write out the elements of $A \times P(B)$, where $P(B)$ is the power set of B , $A = \{2, 3\}$, and $B = \{7, 9\}$.

The power set of B is $\{\emptyset, \{7\}, \{9\}, \{7, 9\}\}$. The cartesian product of A and $P(B)$ consists of all ordered pairs (a, p) where $a \in A$ and $p \in P(B)$. So, the elements of $A \times P(B)$ are: $\{(2, \emptyset), (2, \{7\}), (2, \{9\}), (2, \{7, 9\}), (3, \emptyset), (3, \{7\}), (3, \{9\}), (3, \{7, 9\})\}$