

Cardinality on Set Operations

Example:

$$n(K \cup L) = n(K) + n(L) - n(K \cap L)$$

$$n(Q \cap R) = n(Q) + n(R) - n(Q \cup R)$$

If $n(K) = 11$, $n(L) = 10$, and $n(K \cap L) = 2$,

If $n(Q) = 13$, $n(R) = 40$, and $n(Q \cup R) = 41$,

then $n(K \cup L) = 11 + 10 - 2 = 19$

then $n(Q \cap R) = 13 + 40 - 41 = 12$

PREVIEW

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1) If $n(A) = 15$, $n(B) = 20$ and $n(A \cap B) = 8$

find $n(A \cup B)$

$n(A \cup B) =$ _____

3) If $n(M) = 8$, $n(N) = 12$ and $n(M \cap N) = 3$

find $n(M \cup N)$

$n(M \cup N) =$ _____

5) If $n(E) = 10$, $n(F) = 15$ and $n(E \cap F) = 5$

find $n(E \cup F)$

$n(E \cup F) =$ _____

2) If $n(G) = 22$, $n(H) = 26$ and $n(G \cup H) = 40$,

$n(G \cap H) =$ _____

4) If $n(S) = 18$, $n(T) = 22$ and $n(S \cap T) = 1$,

find $n(S \cap T)$

$n(S \cap T) =$ _____