

Cardinality on Set Operations

Example:

$$n(Y \cap Z) = n(Y) + n(Z) - n(Y \cup Z)$$

$$n(E \cup F) = n(E) + n(F) - n(E \cap F)$$

If $n(Y) = 10$, $n(Z) = 6$, and $n(Y \cup Z) = 13$,

If $n(E) = 22$, $n(F) = 10$, and $n(E \cap F) = 8$,

then $n(Y \cap Z) = 10 + 6 - 13 = 3$

then $n(E \cup F) = 22 + 10 - 8 = 24$

PREVIEW

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1) If $n(X) = 15$, $n(Y) = 22$ and $n(X \cup Y) = 48$,
find $n(X \cap Y)$.

2) If $n(C) = 2$, $n(D) = 1$ and $n(C \cap D) = 1$,

$n(X \cap Y) =$ _____

$n(C \cup D) =$ _____

3) If $n(K) = 12$, $n(L) = 15$ and $n(K \cup L) = 25$,
find $n(K \cap L)$.

and $n(P \cup Q) = 27$,

$n(K \cup L) =$ _____

5) If $n(V) = 18$, $n(W) = 12$ and $n(V \cap W) = 5$,
find $n(V \cup W)$.

$n(F \cap G) = 0$,

find $n(F \cup G)$.

$n(V \cap W) =$ _____

$n(F \cup G) =$ _____