

Cardinality on Set Operations

Example:

$$n(C \cup D) = n(C) + n(D) - n(C \cap D)$$

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

If $n(C) = 34$, $n(D) = 38$, and $n(C \cap D) = 31$,

If $n(F) = 44$, $n(G) = 40$, and $n(F \cup G) = 45$,

then $n(C \cup D) = 34 + 38 - 31$

then $n(F \cap G) = 44 + 40 - 45$

$= 41$

$= 39$

PREVIEW

1) If $n(J) = 10$

and $n(K) = 10$ and $n(J \cap K) = 3$

2) If $n(Q) = 24$, $n(R) = 16$ and

$n(Q \cup R) = 30$,

find $n(J \cup K)$

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$n(J \cup K) =$ _____

$n(Q \cap R) =$ _____

3) If $n(W) = 7$, $n(X) = 9$,

and $n(W \cap X) = 2$

4) If $n(Y) = 12$, $n(Z) = 8$ and

$n(Y \cup Z) = 15$,

find $n(W \cup X)$.

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$n(W \cup X) =$ _____

5) If $n(R) = 12$, $n(S) = 10$,

and $n(R \cap S) = 5$,

find $n(R \cup S)$.

$n(A \cap B) = 38$,

find $n(R \cup S)$.

find $n(A \cup B)$.

$n(R \cap S) =$ _____

$n(A \cup B) =$ _____