

Cardinality on Set Operations

Example:

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

If $n(Q) = 10$, $n(R) = 9$, $n(S) = 8$, $n(Q \cap R) = 6$, $n(R \cap S) = 2$, $n(Q \cap S) = 4$, and

$n(Q \cap R \cap S) = 5$, then $n(Q \cup R \cup S) = 10 + 9 + 8 - 6 - 2 - 4 + 5 = 20$

PREVIEW

1) If $n(B) = 25$, $n(D) = 42$, $n(B \cap D) = 34$, $n(C \cap D) = 10$, $n(B \cap C \cap D) = 3$ and

$n(B \cup C \cup D) =$ _____

$n(B \cap C \cap D) =$ _____

2) If $n(W) = 4$, $n(X) = 7$, $n(Y) = 10$ and

$n(W \cup X \cup Y) =$ _____

$n(W \cap X \cap Y) =$ _____

3) If $n(E) = 12$, $n(F) = 15$, $n(G) = 18$ and

$n(E \cap F \cap G) =$ _____

$n(E \cup F \cup G) =$ _____

**Gain complete access to the largest
collection of worksheets in all subjects!**

**Members, please
log in to
download this
worksheet.**

**Not a member?
Please sign up to
gain complete
access.**

www.mathworksheets4kids.com