Conditions

The complement of set B relative to set A is the set

(A) A\B = x:x∈Aorx∉B
(B) A\B = x:x∈Aandx∉B
(C) A/B = x:x∈Aorx∉B
(D) A/B = x:x∈Aandx∉B

Please explain

Solution

If A and B are sets, then the relative complement of A in B, also termed the set-theoretic difference of B and A, is the set of elements in B, but not in A.

The relative complement of A in B is denoted B \ A according to the ISO 31-11 standard (sometimes written B − A, but this notation is ambiguous, as in some contexts it can be interpreted as the set of all b − a, where b is taken from B and a from A).

Formally

$$B \setminus A = \{x \in B \mid x \notin A\}.$$

For our case B and A places are changed:

(B) A\B = x:x∈Aandx∉B

Answer: (B) A\B = x:x∈Aandx∉B