Perform the below mention boolean algebraic operation for the given set of elements.

1) \(U(A' U B)\) \((B – C)\)
   1. \((A \cap C) \cup B'\) = 
   2. \((B \cup C') \cap (A – C)\) = 
   3. \((A \cup B') \cap C\) = 

2) \(A \cup B \cap C\)
   1. \((B – A) \cap C\) = 
   2. \((A – B)' \cap (C – B)\) = 
   3. \((A \cup B') \cap C\) = 

3) \(U(A \cup B)\)
   1. \((A \cup B) \cap (C – A)\) = 
   2. \(C \cap (A \cup B)'\) = 
   3. \((B \cap C)' \cup (A \cup C)'\) = 

4) \(U(A \cup B)\)
   1. \((A \cup B) \cap (C – A)\) = 
   2. \(C \cap (A \cup B)'\) = 
   3. \((B \cap C)' \cup (A \cup C)'\) = 

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Perform the below mention boolean algebraic operation for the given set of elements.

1) 
   \((A \cap C) \cup B' = \{\text{Fiona, Jake, Lara, Monica, Tom}\}\)
   \(\text{ii) } (B \cup C') - (A - C) = \{\text{Fiona, Kerry, Mark, Tom}\}\)
   \(\text{iii) } (A \cup B') \cap C = \{\text{Lara, Monica, Tom}\}\)

2) 
   \(\text{i) } (A \cap B) = \{\text{June, July, September}\}\)
   \(\text{ii) } (A \cup B) - (A - C) = \{\text{Fiji, Guam, Italy, Peru}\}\)
   \(\text{iii) } (A \cup B) - (A - C) = \{\text{India}\}\)

3) 
   \(\text{i) } (A \cup B) \cap C = \{\text{10, 20, 30, 40, 50, 60, 80, 100}\}\)
   \(\text{ii) } C \cap (A \cup B)' = \{90\}\)
   \(\text{iii) } (B \cap C)' \cup (A \cup C)' = \{10, 20, 30, 40, 50, 60, 80, 100\}\)