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

1) \([-\{(A \cup B)\}^{'}, B', A \cup B]\)

i) \(B = \) 

ii) \(A' \cap B' = \) 

iii) \(A' \cup B = \) 

2) \([-\{\text{July}, A, \text{April}, \text{August}\}^{'}^{}, A', \text{A} \cup \text{B}\) 

i) \(\text{B} = \) 

ii) \(A' \cap B' = \) 

iii) \(A' \cup B = \) 

3) \([-5, 57, 36, 18, 9, 11, 2, 15, 27] = \) 

i) \(B' = \) 

ii) \(A' \cap B' = \) 

iii) \((A \cup B)' = \) 

4) \([-\{\text{One, A, Seven, Eight, Two, Four, Five, Six}\}^{'}^{}, A', B' \cup A\) 

i) \(B' = \) 

ii) \(A' \cap B' = \) 

iii) \((A \cup B)' = \) 

www.mathworksheets4kids.com
Perform the below mention boolean algebraic operation for the given set of elements.

1) \( U \)

2) \( A U B \)

3) \( (A U B')' \)

4) \( A' U B' \)

### Solutions

i) \( B = \{\text{Black, Blue, Gray, Red}\} \)

ii) \( A' \cap B' = \{\text{Pink, White}\} \)

iii) \( A' \cup B = \{\text{Black, Blue, Gray, Pink, Red, White}\} \)

### Sets

- **Set A**: \{White, Yellow, Brown, Grey, Blue, Pink, Violet\}
- **Set B**: \{Black, Blue, Grey, Red\}

### Venn Diagrams

1) White, A, B, U
   - Yellow, Brown, Grey, Blue, Pink, Violet
2) July, A, B, U
   - April, August, June
3) A, B, U
   - 5, 7, 11, 18, 27, 36, 57
4) A, B, U
   - One, Two, Three, Four, Five, Six

### Additional Information

- **Set A**: \{One, Three, Five, Six, Seven\}
- **Set B**: \{Three, Seven\}
- \( A \cup B' \) = \{Two, Four\}

---

**www.mathworksheets4kids.com**

Members, please log in to download this worksheet.

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

Access the largest collection of worksheets for just $19.95 per year!