Place the elements of these sets in the proper locations on the given Venn diagram:

1. \( U = \{1,2,3,4,5,6,7,8,9,10\}, A = \{1,2,3,4,5\}, B = \{1,3,5,7,9\} \)
2. \( U = \{a, d, e, f, i, l, m, o, t, u\}, A = \{a, e, i, o, u\}, B = \{a, d, e, f, i, l\} \)
3. \( U = \{Red, Orange, Yellow, Green, Blue, Indigo, Violet\}, A = \{Red, Yellow, Blue\}, B = \{Green\} \)

Use a Venn diagram similar to the one above to shade each set:

4. \( A \cap B \)
5. \( A \cup B \)
6. \( A \cap B' \)
7. \( B \cup B' \)
8. \( (A \cup B)' \)
9. \( (A \cap B)' \)
10. \( A' \cup B \)
11. \( A' \cap A \)
12. \( A' \cap (B' \cup A') \)
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Place the elements of these sets in the proper location on a Venn diagram similar to the one shown below:

13. \( U = \{a, b, c, d, e, f, g, h, i, j\} \), \( A = \{a, e, g, i\} \), \( B = \{a, b, c, d, e\} \), \( C = \{c, e, f, g, h\} \)
14. \( U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\} \), \( A = \{4, 5, 6, 7\} \), \( B = \{5, 6, 8, 9\} \), \( C = \{2, 3, 5, 7, 8\} \)

Use a Venn diagram similar to the one above to shade each set:

15. \( A \cap B \cap C \)
16. \( A \cup B \cup C \)
17. \( A \cap B \cap C' \)
18. \( A' \cap B \cap C' \)
19. \( (A \cap B) \cup C \)
20. \( A \cap (B \cup C) \)
21. \( C \cap (B \cap A)' \)
22. \( (A \cup B \cup C)' \)
23. \( (A \cap B) \cup (A' \cap C) \)
Solutions:

1. $A \cup B = \{2, 4, 1, 3, 5, 7, 9, 6, 8, 10\}$

2. $A \cap B = \{o, u, a, e, i, d, f, l, m, t\}$

3. $\text{Red, Yellow, Blue} \cup \text{Green} = \text{Orange, Indigo, Violet}$

4. $A \cap B$ (Intersection)

5. $A \cup B$ (Union)

6. $A \cap B$ (Intersection)

7. $A \cup B$ (Union)

8. $A \cap B$ (Intersection)
22.

23.