

Computer Science I Boolean logic name : _____

If A and B are true and X and Y are false statements, which of the following are true?

1. NOT (A OR B)
2. NOT A OR NOT X
3. NOT B AND NOT Y
4. NOT (B AND Y)
5. A OR (X AND Y)
6. (A OR X) AND Y
7. (A OR B) AND (X OR Y)
8. (A AND B) OR (X AND Y)
9. (A AND X) OR (B AND Y)
10. A AND (X OR (B AND Y))
11. A OR (X AND (B OR Y))
12. X OR (A AND (Y OR B))
13. NOT (NOT (NOT (A AND NOT X) AND NOT A) AND NOT X)
14. NOT (NOT (NOT (A AND NOT B) AND NOT A) AND NOT A)
15. ((A AND X) OR NOT B) AND NOT ((A AND X) OR NOT B)
16. ((X AND A) OR NOT Y) OR NOT ((X AND A) OR NOT Y)
17. (A AND (X OR Y)) OR NOT ((A AND X) OR (A AND Y))
18. (X OR (A AND Y)) OR NOT ((X OR A) AND (X OR Y))
19. (X AND (A OR B)) OR NOT ((X OR A) AND (X OR B))
20. (X OR (A AND Y)) OR NOT ((X OR A) OR (X OR Y))