LENGUAJES

Propiedades

Sean A, B, C lenguajes sobre un alfabeto Σ, demostrar:

1. $A \subseteq A, \forall A$
2. $A \subseteq B \wedge B \subseteq C \Rightarrow A \subseteq C$
3. $A = A$
4. $A = B \Rightarrow B = A$
5. $A = B \wedge B = C \Rightarrow B = C$
6. $\emptyset \subseteq A, \forall A$
7. $A \subseteq A \cup B$
8. $B \subseteq A \cup B$
9. $A \subseteq C \wedge B \subseteq C \Rightarrow A \cup B \subseteq C$
10. $(A \cup B) \cup C = A \cup (B \cup C)$
11. $A \cup B = B \cup A$
12. $A \cup \emptyset = A$
13. $A \cup A = A$
14. $A \cap B \subseteq A$
15. $A \cap B \subseteq B$
16. $(A \cap B) \cap C = A \cap (B \cap C)$
17. $A \cap B = B \cap A$
18. $A \cap \emptyset = \phi$
19. $A \cap A = A$
20. $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$
21. $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$
22. $A - \emptyset = A$
23. $A - A = \phi$
24. $A \cap (B - C) = (A \cap B) - (A \cap C)$
25. $(A^c)^c = A$
26. $A \subseteq B \Leftrightarrow B^c \subseteq A^c$
27. $(A \cup B)^c = A^c \cap B^c$
28. $(A \cap B)^c = A^c \cup B^c$
29. $(A \cup B) - C = (A - C) \cup (B - C)$

30. $A - (B \cup C) = (A - B) \cap (A - C)$

31. $(A - B) - C = (A - C) - B$

32. $A \triangle B = B \triangle A$

33. $(A \triangle B) \triangle C = A \triangle (B \triangle C)$

34. $A \triangle \emptyset = A$

35. $A \triangle A = \emptyset$