

Given a set of rules and facts, you have to reason whether a statement is true or false. Here are some facts and rules:

F1: $r1(\text{moritz}, \text{natalie})$.

F2: $r1(\text{moritz}, \text{sophie})$.

F3: $r1(\text{valerie}, \text{natalie})$.

F4: $r1(\text{valerie}, \text{sophie})$.

F5: $r1(\text{katharina}, \text{victoria})$.

F6: $r1(\text{katharina}, \text{benjamin})$.

F7: $r1(\text{david}, \text{theodor})$.

F8: $r1(\text{david}, \text{helga})$.

F9: $r1(\text{david}, \text{patrick})$.

F10: $r1(\text{theodor}, \text{fabian})$.

F11: $r1(\text{patrick}, \text{tobias})$.

F12: $r1(\text{emily}, \text{fabian})$.

F13: $r1(\text{vanessa}, \text{tobias})$.

F14: $r1(\text{natalie}, \text{theodor})$.

F15: $r1(\text{natalie}, \text{helga})$.

F16: $r1(\text{natalie}, \text{patrick})$.

F17: $r1(\text{noah}, \text{victoria})$.

F18: $r1(\text{noah}, \text{benjamin})$.

F19: $r1(\text{olivia}, \text{moritz})$.

F20: $r1(\text{stefan}, \text{moritz})$.

F21: $r1(\text{sophie}, \text{marie})$.

F22: $r1(\text{sophie}, \text{jonas})$.

F23: $r1(\text{oliver}, \text{marie})$.

F24: $r1(\text{oliver}, \text{jonas})$.

F25: $r1(\text{jonas}, \text{katharina})$.

F26: $r1(\text{jonas}, \text{vincent})$.

F27: $r1(\text{jonas}, \text{amelie})$.

F28: $r1(\text{jonas}, \text{larissa})$.

F29: $r1(\text{jonas}, \text{sebastian})$.

F30: $r1(\text{emilia}, \text{katharina})$.

F31: $r1(\text{emilia}, \text{vincent})$.

F32: $r1(\text{emilia}, \text{amelie})$.

F33: $r1(\text{emilia}, \text{larissa})$.

F34: $r1(\text{emilia}, \text{sebastian})$.

F35: $r43(\text{moritz})$.

F36: $r44(\text{valerie})$.

F37: $r44(\text{natalie})$.

F38: $r44(\text{olivia})$.

F39: $r43(\text{stefan})$.

F40: $r44(\text{sophie})$.

F41: $r43(\text{oliver})$.

F42: $r43(\text{jonas})$.

F43: $r44(\text{emilia})$.

F44: $r43(\text{sebastian})$.

F45: $r44(\text{katharina})$.

F46: $r43(\text{vincent})$.

F47: $r43(\text{david})$.

F48: $r43(\text{theodor})$.

F49: $r44(\text{helga})$.

F50: $r43(\text{patrick})$.

F51: $r44(\text{emily})$.

F52: $r43(\text{fabian})$.

F53: $r44(\text{vanessa})$.

F54: $r43(\text{tobias})$.

F55: $r43(\text{noah})$.

F56: $r44(\text{victoria})$.

F57: $r43(\text{benjamin})$.

F58: $r44(\text{marie})$.

F59: $r44(\text{amelie})$.

F60: $r44(\text{larissa})$.

L1: $\forall A, B, C : r1(B, A) \wedge r1(B, C) \wedge r44(A) \rightarrow r2(A, C)$

L2: $\forall A, B, C : r1(B, A) \wedge r1(B, C) \wedge r43(A) \rightarrow r3(A, C)$

L3: $\forall A, B : r1(A, B) \wedge r44(A) \rightarrow r4(A, B)$

L4: $\forall A, B : r1(A, B) \wedge r43(A) \rightarrow r5(A, B)$

L5: $\forall A, B, C : r1(A, B) \wedge r1(B, C) \wedge r44(A) \rightarrow r6(A, C)$

L6: $\forall A, B, C : r1(A, B) \wedge r1(B, C) \wedge r43(A) \rightarrow r7(A, C)$

L7: $\forall A, B, C, D : r1(A, B) \wedge r1(B, C) \wedge r1(C, D) \wedge r44(A) \rightarrow r8(A, D)$

L8: $\forall A, B, C, D : r1(A, B) \wedge r1(B, C) \wedge r1(C, D) \wedge r43(A) \rightarrow r9(A, D)$

- L9: $\forall A, B, C, D : r1(B, A) \wedge r1(B, C) \wedge r1(C, D) \wedge r44(A) \rightarrow r10(A, D)$
- L10: $\forall A, B, C, D : r1(B, A) \wedge r1(B, C) \wedge r1(C, D) \wedge r43(A) \rightarrow r11(A, D)$
- L11: $\forall A, B, C, D, E : r1(B, A) \wedge r1(B, C) \wedge r1(C, D) \wedge r1(D, E) \wedge r44(A) \rightarrow r12(A, E)$
- L12: $\forall A, B, C, D, E : r1(B, A) \wedge r1(B, C) \wedge r1(C, D) \wedge r1(D, E) \wedge r43(A) \rightarrow r13(A, E)$
- L13: $\forall A, B, C, D, E, F : r1(B, A) \wedge r1(C, B) \wedge r1(C, D) \wedge r1(D, E) \wedge r1(E, F) \wedge r44(A) \rightarrow r14(A, F)$
- L14: $\forall A, B, C, D, E, F : r1(B, A) \wedge r1(C, B) \wedge r1(C, D) \wedge r1(D, E) \wedge r1(E, F) \wedge r43(A) \rightarrow r15(A, F)$
- L15: $\forall A, B, C, D, E : r1(B, A) \wedge r1(C, B) \wedge r1(C, D) \wedge r1(D, E) \wedge r44(A) \rightarrow r16(A, E)$
- L16: $\forall A, B, C, D, E : r1(B, A) \wedge r1(C, B) \wedge r1(C, D) \wedge r1(D, E) \wedge r43(A) \rightarrow r17(A, E)$
- L17: $\forall A, B, C, D, E, F, G : r1(B, A) \wedge r1(C, B) \wedge r1(D, C) \wedge r1(D, E) \wedge r1(E, F) \wedge r1(F, G) \wedge r44(A) \rightarrow r18(A, G)$
- L18: $\forall A, B, C, D, E, F, G : r1(B, A) \wedge r1(C, B) \wedge r1(D, C) \wedge r1(D, E) \wedge r1(E, F) \wedge r1(F, G) \wedge r43(A) \rightarrow r19(A, G)$
- L19: $\forall A, B, C, D, E, F : r1(B, A) \wedge r1(C, B) \wedge r1(D, C) \wedge r1(D, E) \wedge r1(E, F) \wedge r44(A) \rightarrow r20(A, F)$
- L20: $\forall A, B, C, D, E, F : r1(B, A) \wedge r1(C, B) \wedge r1(D, C) \wedge r1(D, E) \wedge r1(E, F) \wedge r43(A) \rightarrow r21(A, F)$
- L21: $\forall A, B : r1(B, A) \wedge r44(A) \rightarrow r22(A, B)$
- L22: $\forall A, B : r1(B, A) \wedge r43(A) \rightarrow r23(A, B)$
- L23: $\forall A, B, C : r1(B, A) \wedge r1(C, B) \wedge r44(A) \rightarrow r24(A, C)$
- L24: $\forall A, B, C : r1(B, A) \wedge r1(C, B) \wedge r43(A) \rightarrow r25(A, C)$
- L25: $\forall A, B, C, D : r1(B, A) \wedge r1(C, B) \wedge r1(D, C) \wedge r44(A) \rightarrow r26(A, D)$
- L26: $\forall A, B, C, D : r1(B, A) \wedge r1(C, B) \wedge r1(D, C) \wedge r43(A) \rightarrow r27(A, D)$
- L27: $\forall A, B, C, D : r1(B, A) \wedge r1(C, B) \wedge r1(C, D) \wedge r44(A) \rightarrow r28(A, D)$
- L28: $\forall A, B, C, D : r1(B, A) \wedge r1(C, B) \wedge r1(C, D) \wedge r43(A) \rightarrow r29(A, D)$

Does it imply that the statement “ $r15(\text{sebastian}, \text{sebastian})$ ” is True? If the statement is True, please answer with “True”. Otherwise, please answer with “False”.