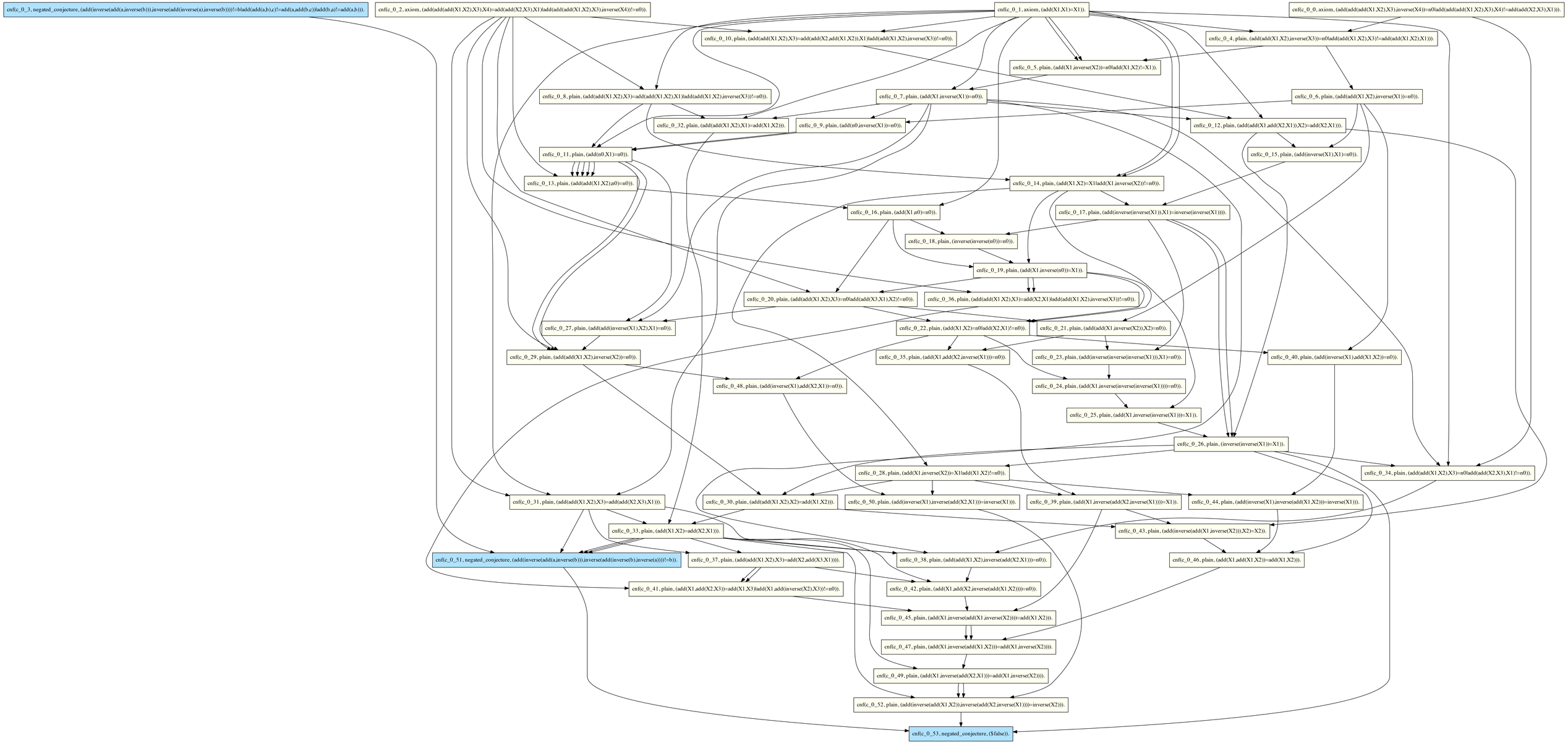

cnf(c_0_3, negated_conjecture, (add(inverse(add(a,inverse(b))),inverse(add(inverse(a),inverse(b))))!=bladd(add(a,b),c)!=add(a,add(b,c))ladd(b,a)!=add(a,b))).
cnf(c_0_2, axiom, (add(add(add(X1,X2),X3),X4)=add(add(X2,X3),X1)ladd(add(add(X1,X2),X3),inverse(X4))!=n0)).
cnf(c_0_1, axiom, (add(X1,X1)=X1)).
cnf(c_0_0, axiom, (add(add(add(X1,X2),X3),inverse(X4))=n0ladd(add(add(X1,X2),X3),X4)!=add(add(X2,X3),X1))).
cnf(c_0_10, plain, (add(add(X1,X2),X3)=add(add(X2,add(X1,X2)),X1)ladd(add(X1,X2),inverse(X3))!=n0)).
cnf(c_0_4, plain, (add(add(X1,X2),inverse(X3))=n0ladd(add(X1,X2),X3)!=add(add(X1,X2),X1))).
cnf(c_0_5, plain, (add(X1,inverse(X2))=n0ladd(X1,X2)!=X1)).
cnf(c_0_8, plain, (add(add(X1,X2),X3)=add(add(X1,X2),X1)ladd(add(X1,X2),inverse(X3))!=n0)).
cnf(c_0_7, plain, (add(X1,inverse(X1))=n0)).
cnf(c_0_6, plain, (add(add(X1,X2),inverse(X1))=n0)).
cnf(c_0_32, plain, (add(add(X1,X2),X1)=add(X1,X2))).
cnf(c_0_9, plain, (add(n0,inverse(X1))=n0)).
cnf(c_0_12, plain, (add(add(X1,add(X2,X1)),X2)=add(X2,X1))).
cnf(c_0_11, plain, (add(n0,X1)=n0)).
cnf(c_0_15, plain, (add(inverse(X1),X1)=n0)).
cnf(c_0_13, plain, (add(add(X1,X2),n0)=n0)).
cnf(c_0_14, plain, (add(X1,X2)=X1ladd(X1,inverse(X2))!=n0)).
cnf(c_0_16, plain, (add(X1,n0)=n0)).
cnf(c_0_17, plain, (add(inverse(inverse(X1)),X1)=inverse(inverse(X1)))).
cnf(c_0_18, plain, (inverse(inverse(n0))=n0)).
cnf(c_0_19, plain, (add(X1,inverse(n0))=X1)).
cnf(c_0_20, plain, (add(add(X1,X2),X3)=n0ladd(add(X3,X1),X2)!=n0)).
cnf(c_0_36, plain, (add(add(X1,X2),X3)=add(X2,X1)ladd(add(X1,X2),inverse(X3))!=n0)).
cnf(c_0_27, plain, (add(add(inverse(X1),X2),X1)=n0)).
cnf(c_0_22, plain, (add(X1,X2)=n0ladd(X2,X1)!=n0)).
cnf(c_0_21, plain, (add(add(X1,inverse(X2)),X2)=n0)).
cnf(c_0_29, plain, (add(add(X1,X2),inverse(X2))=n0)).
cnf(c_0_35, plain, (add(X1,add(X2,inverse(X1)))=n0)).
cnf(c_0_23, plain, (add(inverse(inverse(inverse(X1))),X1)=n0)).
cnf(c_0_40, plain, (add(inverse(X1),add(X1,X2))=n0)).
cnf(c_0_48, plain, (add(inverse(X1),add(X2,X1))=n0)).
cnf(c_0_24, plain, (add(X1,inverse(inverse(inverse(X1))))=n0)).
cnf(c_0_25, plain, (add(X1,inverse(inverse(X1)))=X1)).
cnf(c_0_26, plain, (inverse(inverse(X1))=X1)).
cnf(c_0_28, plain, (add(X1,inverse(X2))=X1ladd(X1,X2)!=n0)).
cnf(c_0_34, plain, (add(add(X1,X2),X3)=n0ladd(add(X2,X3),X1)!=n0)).
cnf(c_0_31, plain, (add(add(X1,X2),X3)=add(add(X2,X3),X1))).
cnf(c_0_30, plain, (add(add(X1,X2),X2)=add(X1,X2))).
cnf(c_0_50, plain, (add(inverse(X1),inverse(add(X2,X1)))=inverse(X1))).
cnf(c_0_39, plain, (add(X1,inverse(add(X2,inverse(X1))))=X1)).
cnf(c_0_44, plain, (add(inverse(X1),inverse(add(X1,X2)))=inverse(X1))).
cnf(c_0_33, plain, (add(X1,X2)=add(X2,X1))).
cnf(c_0_43, plain, (add(inverse(add(X1,inverse(X2))),X2)=X2)).
cnf(c_0_51, negated_conjecture, (add(inverse(add(a,inverse(b))),inverse(add(inverse(b),inverse(a))))!=b)).
cnf(c_0_37, plain, (add(add(X1,X2),X3)=add(X2,add(X3,X1)))).
cnf(c_0_38, plain, (add(add(X1,X2),inverse(add(X2,X1)))=n0)).
cnf(c_0_46, plain, (add(X1,add(X1,X2))=add(X1,X2))).
cnf(c_0_41, plain, (add(X1,add(X2,X3))=add(X1,X3)ladd(X1,add(inverse(X2),X3))!=n0)).
cnf(c_0_42, plain, (add(X1,add(X2,inverse(add(X1,X2))))=n0)).
cnf(c_0_45, plain, (add(X1,inverse(add(X1,inverse(X2))))=add(X1,X2))).
cnf(c_0_47, plain, (add(X1,inverse(add(X1,X2)))=add(X1,inverse(X2)))).
cnf(c_0_49, plain, (add(X1,inverse(add(X2,X1)))=add(X1,inverse(X2)))).
cnf(c_0_52, plain, (add(inverse(add(X1,X2)),inverse(add(X2,inverse(X1))))=inverse(X2))).
cnf(c_0_53, negated_conjecture, ($false)).