# SCT axioms
# SCT problems

**SCT029-1.p** Arrow Order 156_1
Formalization of two proofs of Arrow's impossibility theorem. One formalization is based on utility functions, the other one on strict partial orders.
c_Arrow__Order__Mirabelle_OIIA(v_F) or c_in(v_sko__Arrow__Order__Mirabelle__XIIA__def_2(v_F), c_Arrow__Order__Mirabelle
c_Arrow__Order__Mirabelle_Ounanimity(v_F) or c_in(v_sko__Arrow__Order__Mirabelle__Xunanimity__def_2(v_F), c_Arrow__Ord
(c_in(v_x, c_Arrow__Order__Mirabelle_OProf, tc_fun(tc_Arrow__Order__Mirabelle_Oindi, tc_fun(tc_prod(tc_Arrow__Order__Mira
hAPP(v_F, v_x) = hAPP(v_x, v_i)  cnf(cls_dictator__def_0, axiom)
hBOOL(hAPP(v_S, v_x)) ⇒ c_in(v_x, v_S, t_a)  cnf(cls_mem__def_1, axiom)
c_in(v_x, v_S, t_a) ⇒ hBOOL(hAPP(v_S, v_x))  cnf(cls_mem__def_0, axiom)
c_Arrow__Order__Mirabelle_OIIA(v_F) or c_in(v_sko__Arrow__Order__Mirabelle__XIIA__def_3(v_F), c_Arrow__Order__Mirabelle
c_Arrow__Order__Mirabelle_Odictator(v_F, v_i) or c_in(v_sko__Arrow__Order__Mirabelle__Xdictator__def_1(v_F, v_i), c_Arrow__
c_Arrow__Order__Mirabelle_OIIA(v_F)  cnf(cls_assms_I3_J_0, axiom)
hAPP(v_F, v_sko__Arrow__Order__Mirabelle__Xdictator__def_1(v_F, v_i)) = hAPP(v_sko__Arrow__Order__Mirabelle__Xdictator
c_Arrow__Order__Mirabelle_Odictator(v_F, v_i)  cnf(cls_dictator__def_2, axiom)
c_Arrow__Order__Mirabelle_Ounanimity(v_F)  cnf(cls_u_0, axiom)
¬ c_Arrow__Order__Mirabelle_Odictator(v_F, v_x)  cnf(cls_conjecture_0, negated_conjecture)
c_fequal(v_x, v_x, t_a)  cnf(cls_ATP__Linkup_Oequal__imp__fequal_0, axiom)
c_fequal(v_X, v_Y, t_a) ⇒ v_X = v_Y  cnf(cls_ATP__Linkup_Ofequal__imp__equal_0, axiom)

**SCT072-1.p** Arrow Order 255_4
Formalization of two proofs of Arrow's impossibility theorem. One formalization is based on utility functions, the other one on strict partial orders.
v_thesis____ or v_a = v_b  cnf(cls_that_0, axiom)
c_List_Odistinct(c_List_Olist_OCons(v_sko__CHAINED_-1, c_List_Olist_OCons(v_sko__CHAINED_-2, c_List_Olist_OCons(v_sko_
¬ v_thesis____  cnf(cls_conjecture_0, negated_conjecture)
v_thesis____ or v_x = v_xa  cnf(cls_conjecture_1, negated_conjecture)

**SCT101-1.p** Arrow Order 34_12
Formalization of two proofs of Arrow's impossibility theorem. One formalization is based on utility functions, the other one on strict partial orders.
c_List_Odistinct(c_List_Olist_OCons(v_sko__CHAINED_-1, c_List_Olist_OCons(v_sko__CHAINED_-2, c_List_Olist_OCons(v_sko_
v_x = v_a  cnf(cls_conjecture_0, negated_conjecture)