

prove([not,not,not,a], '|', fde, [not,not,not,b]).
prove([not,not,not,a], '|', k3, [not,not,not,a]).
prove([not,not,not,a], '|', lp, [not,not,a]).

prove([not,not,a], '|', fde, [not,a]).
prove([not,not,a], '|', k3, [not,b]).
prove([not,not,a], '|', lp, [a]).

prove([not,a], '|', fde, [not,not,a,'&',not,not,b]).
prove([not,a], '|', k3, [not,not,a,'&',not,b]).
prove([not,a], '|', lp, [not,a,'&',not,b]).

prove([a], '|', fde, [not,a,'&',b]).
prove([a], '|', k3, [f,'&',not,b]).
prove([a], '|', lp, [c,'&',b]).

prove([not,not,not,a,'&',not,not,not,b], '|', fde, [not,a,'&',not,b,'&',c]).
prove([not,not,not,a,'&',not,not,not,b], '|', k3, [a,'&',f,'&',d]).
prove([not,not,not,a,'&',not,not,not,b], '|', lp, [f,'&',not,e,'&',b]).
prove(['{',not,not,not,a,'&',not,not,not,b,'}'], '|', fde, [d,'V',e]).
prove(['{',not,not,not,a,'&',not,not,not,b,'}'], '|', k3, [not,d,'V',e]).
prove(['{',not,not,not,a,'&',not,not,not,b,'}'], '|', lp, [not,d,'V',not,a]).

prove([not,not,a,'&',not,not,not,b], '|', fde, [b,'V',d,'V',not,f]).
prove([not,not,a,'&',not,not,not,b], '|', k3, [not,a,'V',d,'V',f]).
prove([not,not,a,'&',not,not,not,b], '|', lp, [not,not,a,'V',not,b,'V',g]).
prove(['{',not,not,a,'&',not,not,not,b,'}'], '|', fde, ['{',d,'&',h,'}']).
prove(['{',not,not,a,'&',not,not,not,b,'}'], '|', k3, ['{',b,'&',not,c,'}']).
prove(['{',not,not,a,'&',not,not,not,b,'}'], '|', lp, ['{',not,b,'&',not,c,'}']).

prove([not,not,a,'&',not,not,b], '|', fde, ['{',d,'V',h,'}']).
prove([not,not,a,'&',not,not,b], '|', k3, ['{',b,'&',not,c,'}']).
prove([not,not,a,'&',not,not,b], '|', lp, ['{',not,b,'&',not,c,'}']).
prove(['{',not,not,a,'&',not,not,b,'}'], '|', fde, ['{',b,'V',not,d,'}']).
prove(['{',not,not,a,'&',not,not,b,'}'], '|', k3, ['{',b,'&',not,c,'}']).
prove(['{',not,not,a,'&',not,not,b,'}'], '|', lp, ['{',b,'V',not,c,'}']).

prove([not,a,'&',not,b], '|', fde, [not,b]).
prove([not,a,'&',not,b], '|', k3, [not,g]).
prove([not,a,'&',not,b], '|', lp, [not,not,a]).
prove(['{',not,a,'&',not,b,'}'], '|', fde, [p,'V',q]).
prove(['{',not,a,'&',not,b,'}'], '|', k3, [p,'V',not,q]).
prove(['{',not,a,'&',not,b,'}'], '|', lp, [not,p,'V',p]).

prove([not,not,'{',not,a,'&',not,b,'}'], '|', fde, [not,not,a,'&', '{',b,'&',not,c,'}']).
prove([not,not,'{',not,a,'&',not,b,'}'], '|', k3, [not,a,'&', '{',c,'&',d,'}']).
prove([not,not,'{',not,a,'&',not,b,'}'], '|', lp, [b,'&', '{',c,'&',not,d,'}']).
prove([not,not,'{',a,'&',b,'}'], '|', fde, [not,not,a,'V', '{',b,'V',not,c,'}']).
prove([not,not,'{',a,'&',b,'}'], '|', k3, [not,a,'V', '{',c,'V',d,'}']).
prove([not,not,'{',a,'&',b,'}'], '|', lp, [b,'V', '{',c,'V',not,d,'}']).

prove([not,'{',not,a,'V',not,b,'}'], '|', fde, [b,'V', '{',c,'&',not,d,'}']).

prove([not,'{' ,not,a,'V',not,b,'}''], '|', k3, [not,b,'V','{' ,not,c,'&', not,d,'}'']).
prove([not,'{' ,not,a,'V',not,b,'}''], '|', lp, [not,not,b,'&',not,not,c]).
prove([not,'{' ,a,'V',b,'}''], '|', fde, [not,b,'&',not,c]).
prove([not,'{' ,a,'V',b,'}''], '|', k3, [b,'&',not,c]).
prove([not,'{' ,a,'V',b,'}''], '|', lp, [b,'&',c]).

prove([not,c,'&',{' ,not,a,'&',not,b,'}''], '|', fde, [b,'&',c,'&'not,d]).
prove([not,c,'&',{' ,not,a,'&',not,b,'}''], '|', k3, [b,'V',c,'V',not,d]).
prove([not,c,'&',{' ,not,a,'&',not,b,'}''], '|', lp, [not,not,b,'&',not,not,c]).
prove([not,c,'&',{' ,a,'&',b,'}''], '|', fde, [not,b,'V',not,c]).
prove([not,c,'&',{' ,a,'&',b,'}''], '|', k3, [b,'V',not,c]).
prove([not,c,'&',{' ,a,'&',b,'}''], '|', lp, [b,'V',c]).

prove([c,'&',{' ,not,a,'&',not,b,'}''], '|', fde, ['{' ,a,'&',c,'}'','&',not,d]).
prove([c,'&',{' ,not,a,'&',not,b,'}''], '|', k3, ['{' ,a,'V',c,'}'','V',d]).
prove([c,'&',{' ,not,a,'&',not,b,'}''], '|', lp, ['{' ,b,'&',c,'}'','V',d]).
prove([c,'&',{' ,a,'&',b,'}''], '|', fde, ['{' ,b,'&',c,'}'','&',d]).
prove([c,'&',{' ,a,'&',b,'}''], '|', k3, [not,not,'{' ,not,b,'&',c,'}'']).
prove([c,'&',{' ,a,'&',b,'}''], '|', lp, [not,not,'{' ,not,b,'V',c,'}'']]).

prove([c,'&',a], '|', fde, [not,'{' ,not,b,'&',c,'}'']]).
prove([c,'&',a], '|', k3, [not,'{' ,b,'&',not,c,'}'']]).
prove([c,'&',a], '|', lp, [not,'{' ,not,b,'V',c,'}'']]).