p=(not a and not b) or (a and not c) or (not a and c) see https://www.wolframalpha.com/input/?i=P+and+not+Q&lk=3
pa=b or c   when a true: (not c)   when a false: ((not b) or c))
pb=not a and not c   when b true: (a and not c) or (not a and c)   when b false: (not a) or (a and not c) or (not a and c)
pc=a or b   when c true: (not a and not b) or (not a)   when c false: (not a and not b) or a

a	b	c	p	pa	pb	pc
TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE
TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE
TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	TRUE
TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE
FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE
FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE
FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE
FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE