A + A.B = A |= **A .(1) = A**

A . (A+B) = A |= **(A . A) + (A . B) = A**

A + ~A .B = A + B |= **(A + ~A . C) = (~A . (A + B)) = (~A . A + ~A . ~B) = (0 + ~A . ~B) = (~A . ~B) = A + B**

(A + B) . (A + C) = A + B . C |= **A . A + A . C + B . A + B . C = A . (1 + (C + B)) + B . C = A + B . C**

1.

- A . (A . B + C) |= **A . A . A . B + A . C = A . B + A . C**

- A . B + A . ~B + ~A . ~B |= **A . (B + ~B) + ~A . ~B = A . 1 + ~A . ~B = A + ~A . ~B**

- A . B . C . A + A . ~B . ~C + ~A . B + ~A . ~B + A . B . ~A |= **A . B . C + A . ~B . ~C + ~A . B + ~A . ~B + 0 . B = A . B . C + A . ~B . ~C + ~A . (B + ~B)+ 0 = A . B . C + A . ~B . ~C + ~A = A . (B . C + ~B . ~C) + ~A**

- A . ~C + A . B . ~A + A . B . C + B . B . ~C + B . ~A |= **A . ~C + 0 . B + A . B . C + B . ~C + B . ~A = ~C . (A + B) + A . B . C + B . ~A**

- A . B . C + C . A .B + A . B + A |= **A . B . C + A . B + A ????? = A . B + A = A**

- B . C + A .D + A . B . C . D + C . D . A + ~A |= **B . C + (A . D + A . B . C . D + C . D . A) + ~A = B . C + A . D + ~A**

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