

simplify the following using Boolean expression. $A+B(AC+(B+C')D)$

$$F = A+B(AC+(B+C')D)$$

$$= A + ABC + BD(B + C')$$

$$= A + ABC + BD + BC'D$$

$$= A + AB + BD(1 + C')$$

$$= A + AB + BD$$

$$= A(1 + B) + BD$$

$$= A + BD$$