Index of Hydrogen Deficiency (or degrees of unsaturation)

Calculate the index of hydrogen deficiency for the following formulas:

 $C_5H_{10}\\$ 

 $C_6H_6O$ 

 $C_8H_{13}NO_2\\$ 

 $C_9H_{12}Cl_3NO\\$ 

 $C_9H_8O_4$ 

 $C_{21}H_{30}O_2$ 

 $C_{17}H_{21}NO_4\\$ 

 $C_{11}H_{15}NO_2\\$ 

 $C_9H_{20}$ 

 $C_7H_8$ 

 $C_5H_7C1$ 

 $C_9H_9NO_4$