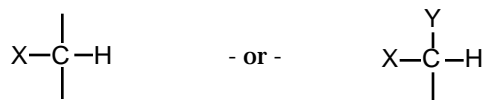


Shoolery's Additivity Rules for Predicting the Chemical Shift of Protons of the Type:



$$(\text{ppm}) = 0.233 + i$$

Functional Group (X,Y) i (ppm)

-Cl 2.53

-Br 2.33

-I 1.82

-OH 2.56

-OR 2.36

-OAr 3.23

 3.13

-SR 1.64

-NR₂ 1.57

-CH₃ 0.47

 1.32

 1.85

 1.44

 1.70

 1.55

 1.59

-CF₃ 1.14

-CN 1.70