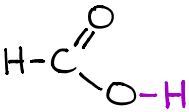
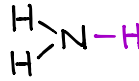
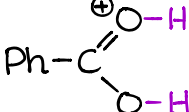
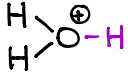
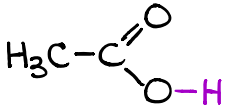
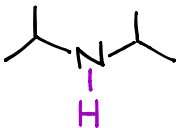
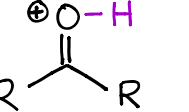
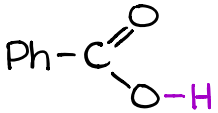
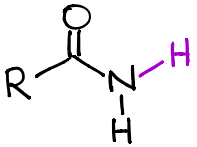
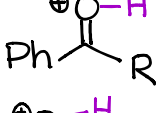
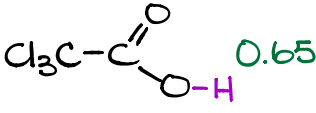
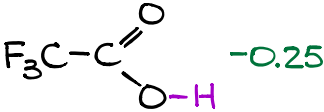
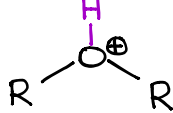
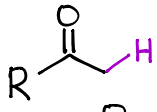
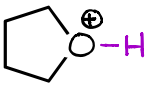
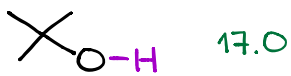
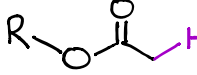
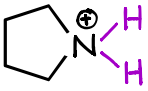

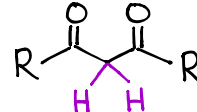
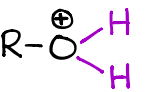
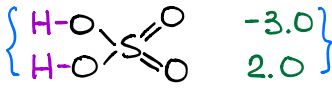

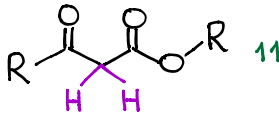
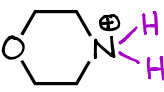
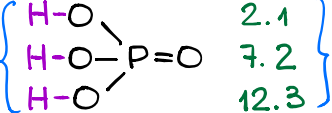

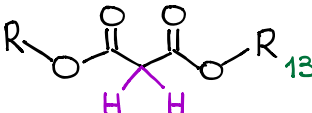
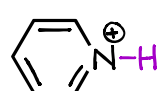
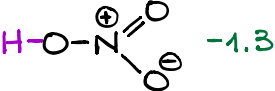
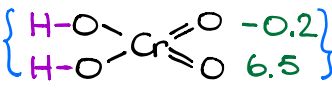
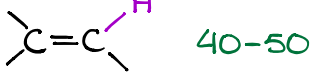
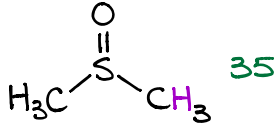
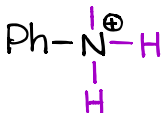

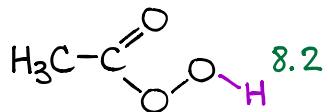
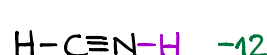
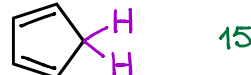
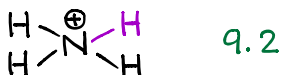

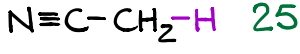
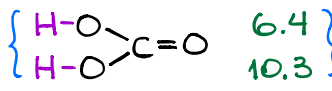
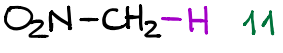


pKa Values of Common Species in Organic Chemistry

Inorganic Acids	Carb. Acids	Amines & Amides	Protonated Species	
HO-H 15.7	 3.7	 36	 -7.8	
 -1.7	 4.8	 38	 -7.2	
HS-H 7.0	 4.2	 15	 -6.2	
H-I -9.0	 0.65	Carbonyls		
H-Br -9.0	 -0.25			
H-Cl -8.0	Alcohols & Thiols		 -3.8	
H-F 3.2			 19-20	 -2.1
H-CN 9.2	 17.0	 22-25	 11.3	
H-N ₃ 4.7	 10.0	 9.0	 -2.2	
 -3.0 } 2.0 }	 10.0	 11	 8.5	
 2.1 } 7.2 } 12.3 }	 7.0	 13	 5.2	
 -1.3	Hydrocarbons		Other	
 -0.2 } 6.5 }				
MsO-H -2.6	 40-50	 35	 4.6	
TsO-H -2.8	 23-26	 8.2	 -12	
TfO-H -14.0	 15	How to find the K of a RXN		
 9.2	 25			HA + B ⇌ A [⊖] + HB [⊕]
HOO-H 11.7	 25	K = 10 ^{pKa(HB[⊕]) - pKa(HA)}		
 6.4 } 10.3 }	 11			

The acidic hydrogens are highlighted.