Worksheet for Identifying Types of Acids and Bases.

The biggest impediment to solving acid/base calculations is knowing what those compounds are. For each of the compounds listed below, assign what type of acid or base it is and then assign a symbol that you would use in an acid or base calculation

Possible types of acid or base answers:

strong acid, weak acid, strong base, weak base, Lewis acid, neither, amphiprotic

Possible symbols: **H^+, OH^-, HA, A^-, B, BH^+, none**

Name or molecular formula	Type of acid or base	Symbol in calculations
hydrochloric acid	Strong acid	H^+
potassium malonate	Weak base	A^-
NH_4Cl	Weak acid	BH^+
H_2SO4		
HCOOH		
tartaric acid		
hydrofluoric acid		
$Ba(OH)_2$		
HNO_2		
hypochlorous acid		
ammonium nitrate		
NH_3		
lithium hydroxide		
$FeCl_3$		
potassium bisulfate		
Br_2		
phosphoric acid		
dimethylamine		
$CH_3CH_2C{=}CCOOH$		
$CH_3COO^-Na^+$		
$Al(OH)_3$		
$(CH_3)_2NH$		
$CH_3NH_3^+Cl^-$		
Sulfurous acid		
Hydronium ion		
H_2O		
$NaHCO_3$		
Sodium carbonate		
H_2CO_3		
H_3PO_4		
Hydroxide ion		
$HClO_3$		
Ammonium acetate		
Potassium chloride		
H_3O^+		
Hydroiodic acid		
Br^-		
CH_3COOH		
BH_3		

Answer key for worksheet

Name or molecular formula	Type of acid or base	Symbol in calculations
hydrochloric acid	Strong acid	H^+
potassium malonate	Weak base	A^-
NH_4Cl	Weak acid	BH^+
H_2SO4	Strong acid	H^+
HCOOH	Weak acid	HA
tartaric acid	Weak acid	HA
hydrofluoric acid	Weak acid	HA
$Ba(OH)_2$	Strong base	OH^-
HNO_2	Weak acid	HA
hypochlorous acid	Weak acid	HA
ammonium nitrate	Weak acid	BH^+
NH_3	Weak base	B
lithium hydroxide	Strong base	OH^-
$FeCl_3$	Weak acid	Lewis acid
potassium bisulfate	amphiprotic	HA^-
Br_2	neutral	none
phosphoric acid	Weak acid	H_3A
dimethylamine	Weak base	B
$CH_3CH_2C{=}CCOOH$	Weak acid	HA
$CH_3COO^-Na^+$	Weak base	A^-
$Al(OH)_3$	Weak base	OH^-
$(CH_3)_2NH$	Weak base	B
$CH_3NH_3^+Cl^-$	Weak acid	BH^+
Sulfurous acid	Weak acid	HA
Hydronium ion	Strong acid	H^+
H_2O	amphiprotic	H^+ and OH^-
$NaHCO_3$	amphiprotic	HA^-
Sodium carbonate	Weak base	A^-
H_2CO_3	Weak acid	HA
H_3PO_4	Weak acid	HA
Hydroxide ion	Strong base	OH^-
$HClO_3$	Strong acid	H^+
Ammonium acetate	Weak acid and weak base	BH^+ and A^-
Potassium chloride	Neutral	none
H_3O^+	Strong acid	H^+
Hydroiodic acid	Strong acid	H^+
Br^-	Neutral	none
CH_3COOH	Weak acid	HA
BH_3	Weak acid	Lewis acid