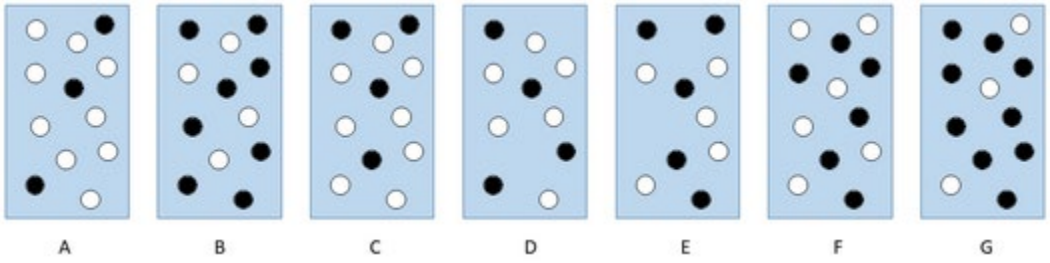
Soluble Ionic Compounds Exercise

For the following soluble, ionic compounds fill in the blank cells of the table with the symbol of the cation, symbol of the anion, the formula of the ionic compound and the letter that corresponds to the diagram below the table that represents the ions in solution (*water molecules are implied but not shown*).

Name	Cation	Anion	Formula	Diagram
Cobalt(II) nitrate	Co^{2+}	NO_3^-	$Co(NO_3)_2$	C
Ammonium sulfide				
Ammonium phosphate				
Potassium carbonate				
Iron(III) sulfate				
Aluminum sulfate				
Iron(III) nitrate				
Magnesium sulfate heptahydrate				
Iron(II) sulfate				
Manganese(II) chloride				
Mercury(II) acetate				
Aluminum bromide				
Potassium phosphate				

Enter the letter that corresponds to the correct representation of the above soluble ionic compounds in aqueous solution in the rightmost column of the table.

In the diagrams below: ● represents a cation and ○ represents an anion.



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Name	Cation	Anion	Formula	Diagram
Cobalt(II) nitrate	Co^{2+}	NO_3^-	$Co(NO_3)_2$	C
Ammonium sulfide	NH_4^+	S^{2-}	$(NH_4)_2S$	B
Ammonium phosphate	NH_4^+	PO_4^{3-}	$(NH_4)_3PO_4$	G
Potassium carbonate	K^+	CO_3^{2-}	K_2CO_3	B
Iron(III) sulfate	Fe^{3+}	SO_4^{2-}	$Fe_2(SO_4)_3$	D
Aluminum sulfate	Al^{3+}	SO_4^{2-}	$Al_2(SO_4)_3$	D
Iron(III) nitrate	Fe^{3+}	NO_3^-	$Fe(NO_3)_3$	A
Magnesium sulfate heptahydrate	Mg^{2+}	SO_4^{2-}	$MgSO_4 \cdot 7H_2O$	F
Iron(II) sulfate	Fe^{2+}	SO_4^{2-}	$FeSO_4$	F
Manganese(II) chloride	Mn^{2+}	Cl^-	$MnCl_2$	C
Mercury(II) acetate	Hg^{2+}	CH_3COO^-	$Hg(CH_3COO)_2$	C
Aluminum bromide	Al^{3+}	Br^-	$AlBr_3$	A
Potassium phosphate	K^+	PO_4^{3-}	K_3PO_4	G

Enter the letter that corresponds to the correct representation of the above soluble ionic compounds in aqueous solution in the rightmost column of the table.

In the diagrams below: ● represents a cation and ○ represents an anion.