

Chemistry 1 a Week Activity Foundation Answers		43 rd Week
Name: Class:		
What ion makes a solution acidic?	Give the formula of an ammonium ion.	
Hydrogen/ H ⁺	NH ₄ ⁺	
Ammonia reacts with nitric acid to form ammonium nitrate. Complete the word equation for this reaction.		
Ammonia + nitric acid → ammonium nitrate		
Name the salt produced when ammonia reacts with hydrochloric acid.	Give the electronic configuration of a potassium ion.	
Ammonium chloride	2, 8, 8	
A sample of naturally occurring rubidium (Rb) is a mixture of two isotopes. It contains: 72.2% of rubidium-85 27.8% of rubidium-87 Calculate the relative atomic mass of rubidium based on this data.		
$(72.2 \times 85) + (27.8 \times 87) \div 100 = 85.56$ relative atomic mass = 85.56		
Describe a test to show that a gas is oxygen. Test: <u>glowing splint.</u> Positive result: <u>if the gas is oxygen the splint will relight or reignite.</u>	Describe a test to show that a sample contains carbonate ions. Test: <u>add acid to the sample.</u> Accept any acid. Result: <u>if there is fizzing, bubble the gas through limewater. If the limewater turns cloudy carbonate ions were present.</u>	
Balance the following equations. $2\text{Rb (s)} + \text{Li}_2\text{SO}_4 \text{ (aq)} \rightarrow \text{Rb}_2\text{SO}_4 \text{ (aq)} + 2\text{Li (s)}$ $\text{C}_5\text{H}_8\text{O}_2 + 2\text{NaH} + 2\text{HCl} \rightarrow \text{C}_5\text{H}_{12}\text{O}_2 + 2\text{NaCl}$		
Explain, in terms of energy, why ionic compounds have high melting and boiling points. An answer to include the following: • Ionic compounds form a giant ionic lattice structure. • There are strong electrostatic forces of attraction between the oppositely charged ions. • A large amount of (thermal) energy is needed to overcome these strong forces.		