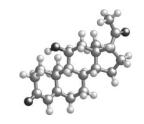


Question 1:



rubidium (.....) and caesium (.....).

## Chem!stry

Name:(	
Class:	
Date: / /	

## **Properties of the Group 1 Metals – the Alkali Metals**

The Group 1 or Alkali metals are lithium (Li), sodium (.....), potassium (.....),

Qu	estion 2:				
The table below lists the melting points, boiling points and densities of the Group 1 metals:					
	Group 1 Metal	Melting Point / °C	Boiling Point / °C	Density / g/cm <sup>3</sup>	
	Lithium	180	1330	0.53	
	Sodium	97.8	890	0.97	
	Potassium	63.7	774	0.86	
	Rubidium	38.9	688	1.53	
	Caesium	28.7	690	1.90	
Us( <b>a)</b>	Use the table above to help you answer the following questions:  a) Look at the densities of lithium, sodium and potassium. What would you expect to see when you add a small piece of lithium, sodium or potassium to a trough of water?				
b)	Look at the melting point of caesium. What would you expect to see if you held a small piece of caesium in your hand?				
c)	How do the physic Group?	al properties of the Gro	oup 1 metals change wh	nile descending the	

d)	Comment on the strength of the metallic bond within the Group 1 metals. Would you expect the Group 1 metals to be hard or soft?			
e)	Are the pro	operties of the Group 1 metals typical of all me	tals? Briefly explain your	
f)	Which properties of the Group 1 metals would you expect to be the same as thosother metals?			
<ul><li>Question 3:</li><li>a) (Practical demonstration or video). Complete the table below to describe how the Group 1 metals react with cold water:</li></ul>				
	Metal	What do you observe during the reaction?	pH of solution (acid or alkali?)	
	Lithium		pH =	
•	Sodium		pH =	
P	otassium		pH =	
b)	-	activity). Try to collect a test tube of the gas that lint into the test tube. What do you observe? Wollected?		

C)	Ose your observations to arrange the Group i metals in order or reactivity.
	Least reactive:
	Most reactive:
d)	What is the trend or pattern in the reactivity of the Group 1 metals?
e)	What would you expect to see when the Group 1 metals <i>rubidium</i> and <i>caesium</i> are added to a trough of cold water?
Wri	estion 4: te a word equation and a balanced chemical equation, including state symbols, for the ction between each Group 1 metal and water:
a)	The reaction between <i>lithium</i> and water:
Wo	rd equation: lithium + water → + +
Bal	anced chemical equation:
Wo	The reaction between <b>sodium</b> and water:  rd equation: sodium + water →+
<b>c)</b> Wo	The reaction between <i>potassium</i> and water: rd equation: potassium + water →+
<b>Qu</b> Pre	estion 5: edict the formulae of rubidium chloride, caesium sulfate, rubidium nitrate and caesium
	bonate. Would you expect these salts to be soluble or insoluble in water?