

Name \_\_\_\_\_  
 Teacher \_\_\_\_\_  
 Class \_\_\_\_\_ Block \_\_\_\_\_  
 Date \_\_\_\_\_

**Chapter 8 Review**

solid magnesium reacts with oxygen gas

1. Write the formula and state of matter for both reactants.



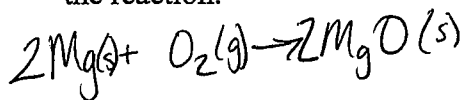
2. Why is oxygen not written as O (g)?  
*It's diatomic*
3. What is the word that means the same thing as the arrow? *"yields" "produces"*

4. When we did this reaction in your lab, what did the magnesium look like when it burned? *very bright white light*

5. What is the state of matter for magnesium oxide? *solid*

6. Write the formula and state of matter for the product.  $Mg^{2+}O^{2-}$        $MgO(s)$

7. Write the balanced chemical equation for the reaction.

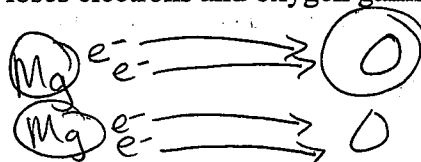


8. What characteristics of this reaction make it a synthesis reaction? *2+ reactants, only one product*

9. What characteristics of this reaction make it an oxidation-reduction (redox) reaction?  *$O_2$  present, Mg loses  $e^-$ , O gains  $e^-$*

10. What characteristics of this reaction make it a combustion reaction? *it burns*

11. Draw a picture showing how magnesium loses electrons and oxygen gains electrons.



12. What does OIL RIG stand for? What is gained and lost? *electrons*  
*oxidation is loss*  
*reduction is gain*

13. Are metals oxidized or reduced? Why?  
*they lose  $e^-$*

14. Are nonmetals oxidized or reduced? Why?  
*they gain  $e^-$*

15. What ion do all acids have? Give the name and formula.  *$H^+$  hydrogen ion*

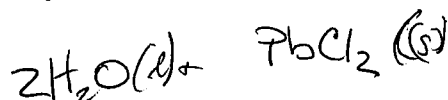
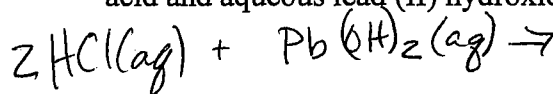
16. What ion do all bases have? Give the name and formula.  *$OH^-$  hydroxide*

17. What do all Acid-Base Reactions have as products? (2 things)  *$H_2O$  + salt*

18. What is the definition of a salt? *a product of an acid-base reaction*

19. What does aqueous mean? *dissolved in  $H_2O$*

20. Give the balanced molecular equation for the reaction between aqueous hydrochloric acid and aqueous lead (II) hydroxide.



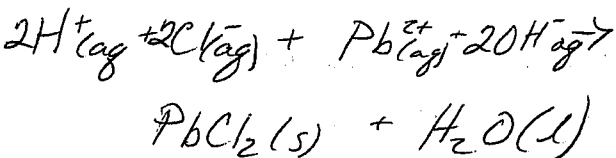
21. Why is lead (II) chloride a solid?

it is insoluble in  $H_2O$

22. Why is water a liquid and not aqueous?

Water can't dissolve itself.

23. Give the balanced complete ionic equation for #20.



24. Why do you not separate lead (II) chloride in the complete ionic equation?

It is a solid so isn't ionized

25. What are ions called that stay in solution and do not form the solid?

Spectator ions.

26. Why is this a double replacement reaction?

2 compounds switch partners

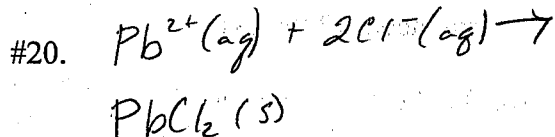
27. Why is this not a redox reaction?

nothing changes charge.  
No  $e^-$  transfer.

28. Why is this a precipitation reaction?

2 aqueous substances make a solid.

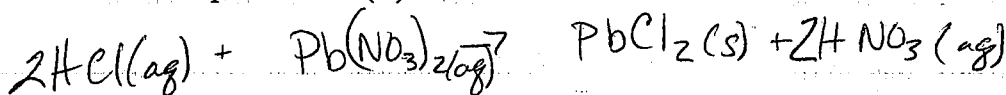
29. Give the balanced net ionic equation for



30. Give the balanced molecular equation for

the reaction between aqueous hydrochloric

acid and aqueous lead (II) nitrate.

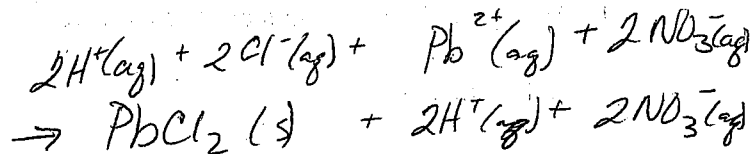


31. Give the balanced complete ionic equation

for the reaction between aqueous

hydrochloric acid and aqueous lead (II)

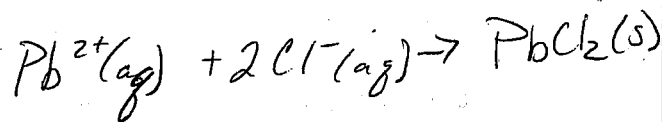
nitrate.



32. Give the balanced net ionic equation for the

reaction between aqueous hydrochloric acid

and aqueous lead (II) nitrate.



33. Why is this double replacement? 2 compounds switch partners.

34. Why is this precipitation?

2 liquids form a solid

35. Why is this not redox?

Charges don't change  
No electrons transfer.