Complete the following reactions. Circle the most favored products.

1. 
$$+ H_2(g) \rightarrow$$

$$2.$$
  $500 \text{ K}$ 

$$3.$$
 + HCl  $\rightarrow$ 

$$4. \bigcirc + \bigcirc c_{\mathsf{I}} \longrightarrow$$

$$5.$$
 + HCI  $\rightarrow$ 

7. 
$$+ Cl_2 \rightarrow$$

10. 
$$\begin{array}{c} CI \\ \hline \Delta \end{array}$$

12. 
$$\rightarrow$$
 H<sub>2</sub>O  $\rightarrow$ 

15. 
$$\rightarrow$$
 + H<sub>2</sub>O  $\rightarrow$ 

19. 
$$+ H_2O \rightarrow$$

21. 
$$+ H_2(g) \rightarrow$$

22. 
$$+ H_2O \rightarrow$$

23. 
$$+ H_2O \rightarrow$$

Question 1: 
$$+ H_2(g)$$

Question 3: 
$$H_2(g)$$
 +  $\bigcirc$ CI

Question 5: 
$$+$$
  $\downarrow$   $\Box$ 

Question 7: 
$$CI$$

Question 8: 
$$HCI$$
 +  $CI$  +  $CI$  +  $CI$  +  $CI$  +  $CI$ 

Question 12: 
$$H_2(g)$$
 + OH + OH

Question 14: 
$$\bigcirc$$
 OH  $\bigcirc$   $\bigcirc$  HO  $\bigcirc$  OH  $\bigcirc$  OH

Question 15: 
$$H_2(g)$$
 + OH + OH OH

Question 16: 
$$+ H_2O$$

Question 18: 
$$_{--}$$
co<sub>2</sub> (g) +  $_{---}$  H<sub>2</sub>O (g) + Heat Balance:  $(1,9,6,6)$