Le Chatelier's Principle – Sample Questions

LeChatelier Practice - Use the following to answer questions 1-3:

The following questions refer to the equilibrium shown here:
$CaCO_3(s) \rightleftharpoons CaO(s) + CO_2(g)$

1. What would happen to the system if more $CaCO_3$ were added?
   A) More CaO would be produced
   B) The c[illegible]e.
   C) The a[illegible]
   D) The pressure would increase.
   E) Nothing would happen.

Ignore this question please-

2. What would happen to the system if the total pressure were increased by adding $CO_2(g)$?
   A) Nothing would happen.
   B) More $CO_2(g)$ would be produced.
   C) The amount of CaO would increase.
   D) The amount of $CaCO_3$ would increase.
   E) Equilibrium would shift to the right.

3. What would happen to the system if the total pressure were increased by decreasing the volume of the container?
   A) Nothing would happen.
   B) More $CO_2(g)$ would be produced.
   C) The amount of CaO would increase.
   D) The amount of $CaCO_3$ would increase.
   E) Equilibrium would shift to the right.

Use the following to answer questions 4-7:

Consider the reaction $2H_2(g) + O_2(g) \rightleftharpoons 2H_2O(g)$ at some equilibrium position. Using the following choices, indicate what will happen if the changes below are made.

a. shifts to the left
b. shifts to the right
c. no change

4. Additional $H_2O(g)$ is injected into the reaction vessel.

5. Some $H_2(g)$ is removed from the reaction vessel.

6. The size of the reaction vessel is decreased.

Answers: **1. X 2. D 3. D 4. A 5. A 6. B**