Solutions Lesson 4 Check for Understanding

1. Katie dilutes a 50.0 mL *of* a 2.63 M KBr solution with water until it has a volume of 275 mL. What is the solution's new concentration?

2. What volume should Bria dilute a 12.0M HCl solution to make 1.50 L *of* a 2.00 M solution?

3. Shyam leaves a 500.0 mL solution of NaCl(aq) out on the counter to evaporate. After two days, the solution has a volume of 379.0 mL and a concentration *of* 0.74 M. What was the original concentration of the solution?

4. Jake wants to make a 0.10 M solution out of 0.37 L *of* 0.80 M $AgNO_3$.
   a. To what volume must he dilute the original solution?
   b. How much *water* should he add to accomplish this?

5. If Carly has 340.0 mL *of* a 0.50 M NaBr solution, what will the concentration be if she *adds 560.0 mL more* water to it?

6. Salt is added to water and the mixture is stirred until no more salt dissolves. The salt that does not dissolve is allowed to settle out. What happens to the concentration of salt in solution if water evaporates until the volume of the solution is half the original volume? (Assume temperature remains constant.)The concentration:
   a. Increases
   b. Decreases
   c. Stays the Same.