1. **Given the following values for boolean variables p, q, r, s, evaluate each condition.**

   p = true, q = true, r = false, s = false

   a.) `(p || r) && (q || s)`

   b.) `!p || s && q || r`

   c.) `(p && r) || (q && s)`

   d.) `!(p && q && r)`

2. **Do a hand simulation of each program.**

   a.)
   ```java
   public class HK4Q2a {
       public static void main(String args[]) {
           int alpha = 2;
           int beta = 5;

           if (alpha > beta) {
               alpha++;
           }

           if (alpha <= beta) {
               System.out.println(alpha);
           } else {
               System.out.println(beta);
           }

           System.out.println(alpha + "" + beta);
       }
   }
   ```

   b.)
   ```java
   public class HK4Q2b {
       public static void main(String args[]) {
           int gamma = 3;
           int delta = 4;

           if (gamma == delta) {
               gamma--;
           } else if (gamma < delta) {
               gamma += 2;
               delta += 2;
           }

           System.out.println(delta + "" + gamma);
       }
   }
   ```