2. **Control statements**

   (a) Under what conditions will the statements p1, p2, p3 and p4 be executed?

   ```
   if (a<0) { p1 } else if (b!=0) { p2 }
   else if (a==b) { p3 } else if (a==0) { p4 }
   ```

   [4]

   (b) Rewrite the following program statement

   ```
   if (a<b) if (b<0) { p1 }
   else if (a==b) if (b==0) { p2 } else if (b>0) { p3 }
   ```

   in the simplest form you can. [2]

   (c) Give the output of the following program.

   ```
1     class TooMany {
2         static void howMany (int k) {
3             switch (k)  {
4              case 1 : System.out.print("one");
5              case 2 : System.out.print("too");
6              case 3 : System.out.println("many");
7             }
8         }
9
10        public static void main(String[] args) {
11             howMany(3);
12             howMany(2);
13             howMany(1);
14        }
15    }
   ```

   [3]

   State the difference to the output if a break statement were added to the end of:

   (i) line 4;
   (ii) lines 4 and 5;
   (iii) lines 4, 5 and 6.

   [3]