Quiz 8 4/7/14   Name:

1) Given the following declarations:
   int a = 2;
   int b = 3;
   double x = 2.0;
   double y = 1.5;
   double[] list = {0.5, 0.5, 2.0};

   For each of the following assignments, if the code is legal Java, draw a diagram showing the contents of the array and circle the element modified by the assignment; otherwise write "ERROR."

   a) list[2] = a;  
      ![Diagram]
      \( \sqrt{ } \)

   b) list[1] = y;  
      ![Diagram]
      \( \sqrt{ } \)

   c) list[x] = 4;  
      Error \( \rightarrow \) x needs to be int.  
      ![Diagram]
      \( \sqrt{ } \)

   d) list[(a * b)/4] = b;  
      \( 2 \cdot 3 = (a / 4 = 1) \)  
      ![Diagram]
      \( \sqrt{ } \)

2) Draw a diagram showing the array contents after execution of the following code fragment:

   int[] list = new int[3];  
   for (int i=0; i < list.length; i++)
      list[i] = (i + 1) * 100;

   ![Diagram]
   \( \sqrt{ } \)

3) Assume an array list has been declared and initialized as in the previous question. Write a code fragment that uses a loop to add 2 to each array element.

   for (int i = 0; i < list.length; i++)
      list[i] = list[i] + 2;  
      ![Diagram]
      \( \sqrt{ } \)
Quiz 8 4/7/14 Name:

1) Given the following declarations:
   int a = 3;
   int b = 2;
   double x = 2.0;
   double y = 1.5;
   double[] list = {2.0, 2.1, 2.2};

   For each of the following assignments, if the code is legal Java, draw a diagram showing the contents of the array and circle the element modified by the assignment; otherwise write “ERROR.”

   a) list[a] = 3;  
      \[ \begin{array}{c}
           2.0 \\
           2.1 \\
           2.2 \\
       \end{array} \]  
      ERROR (out of bounds)

   b) list[x] = x;  
      \[ \begin{array}{c}
           2.0 \\
           2.1 \\
           2.2 \\
       \end{array} \]  
      ERROR

   c) list[b] = 4;  
      \[ \begin{array}{c}
           2.0 \\
           2.1 \\
           2.4 \\
       \end{array} \]  
      \checkmark

   d) list[(a * b)/4] = b;  
      \[ \begin{array}{c}
           2.0 \\
           2.1 \\
           2.2 \\
       \end{array} \]  
      \checkmark

2) Draw a diagram showing the array contents after execution of the following code fragment:

   int[] list = new int[3];
   for (int i=0; i < list.length; i++)
      list[i] = i + 10;

   \[ \begin{array}{c}
       10 \\
       11 \\
       12 \\
   \end{array} \]  
   \checkmark

3) Write code that sets each element of an array called nums to the value of the constant INITIAL (of type double).
   double initial = 2;
   double[] nums = new double[4];
   for (int i=0; i < list.length; i++)
      nums[i] = initial;

   \checkmark