Cyclomatic Complexity Exercise

Name _____

Consider the following code:

```
void bubble(int t[], unsigned int size) {
 unsigned int i;
 bool done;
 do {
  done = true;
  for(i = 0;i<size-1;i++) {
      if(t[i] > t[i+1]) {
          swap(t[i],t[i+1]);
          done = false;
          } // end of if
      } // end of for
  } // end of do
 while (!done);
return;
}
```

Draw the flow graph for this code:

What is the Cyclomatic Complexity number?

Consider this code:

```
void quick(int t[], unsigned int lo, unsigned int hi) {
  unsigned int top=lo+1, bottom=hi;
  /* divide the array in half, pivot is first item
       find all items in wrong half
  */
  do {  // the pivot will be the first entry
      // Move the bottom up until t[bottom] greater pivot
      while(t[bottom] > t[lo] && top < bottom) {
          bottom--;
          }
      // Move the top down until t[top] less than pivot
      while(t[top] < t[lo] && top < bottom) {
          top++;
          }
      if (top < bottom) {
           swap(t[top],t[bottom]);
           bottom--;
           }
      }
  while (top < bottom);
  // We have exchanged all the misplaced items
  // Put the pivot in its place
  if (t[lo] >= t[top]){ // Prevent swap if pivot is low
       swap(t[lo],t[top]);
       if (lo < top-1)
           quick(t,lo,top-1);
       if (top+1 < hi)
           quick(t,top+1,hi);
          }
  else  // pivot was low
       if (lo+1 < hi)
            quick(t,lo+1,hi);
  return;
 } // quick
```

What is the Cyclomatic Complexity number?