Question 2 1 / 1 point

$\sum_{i=2}^{n} (2) + \sum_{i=0}^{n-1} (n)$

What is the closed form for the summation shown above?

- $n^2 + n - 2$
- $n^2 + 2n + 1$
- ✓ $n^2 + 2n - 2$
- $n^2 - n$
- $n^2 + 2n$
- none of the above

Question 1 **0 / 1 point**

What is the Basic Operation in the code or pseudocode shown below?

```
Algorithm MinDistance (A[0..x-1])
//Input: An array A[0..x - 1] of numbers
dmin = infinity
for i = 0 to x-1 do
    for j = 0 to x-1 do
        if i != j and |A[i]-A[j]| < dmin
            dmin = |A[i]-A[j]|
return dmin
```

Note: the vertical bars mean "absolute value", ie, "positive value of".

Note: a single = is used for assignment.

- ✖ ◉ comparison of i to j
- ○ assignment
- ➡ ○ comparison of dmin
- ○ subtraction

Question 5 **1 / 1 point**

Consider the algorithm shown below. What is the output if the input is A[2,1,4,1,2]?

```
Algorithm Secret(A[0..n-1])
//Input: An array A[0..n-1] of n real numbers
minval = A[0]
maxval = A[0]
for i = 1 to n-1 do
    if A[i] < minval
       minval = A[i]
    if A[i] > maxval
       maxval = A[i]
return (maxval - minval)
```

Note: a single = is used to indicate indicate assignment in the above algo.

Answer: 3 ✔

Question 4 1 / 1 point

$(43 + 6!) / 14 \log 2$

What is the big-oh efficiency class for the function shown above?

- $O(n)$
- $O(n!)$
- $O(n^2)$
- $O(n^3)$
- $O(n \log n)$
- $O(2^n)$
- $O(\log n)$
- ✓ $O(1)$

Question 3 **0 / 1 point**

What is the big-oh efficiency class for the algorithm shown below? Assume the input n is very large.

```
i = 0
j = 0

while i < n do
   x = x + 2
   for j = 0 to n do
       x = x + 2
       j = j + 1
   // end of for j
   i = i + 1
// end of while i
```

- $O(n!)$
- $O(2^n)$
- ➡ $O(n^2)$
- ✖ $O(n)$
- $O(\log n)$
- $O(1)$
- $O(n \log n)$

원본 파일의 저장 기간이 만료되어 미리보기 파일로 대체됩니다.