

Answer the questions in the spaces provided. If you run out of room for an answer, continue on the back of the page.(note)

Name and section: _____

Instructor's name: _____

1. hangisine deniz denir?

- ☐ atlantis
- ☐ malidis
- ☐ makartis

2. Bu bir açık uçlu sorudur öyle mi acaba?

Compute

$$\int_0^{\infty} \frac{\sin(x)}{x}$$

$$\lim_{x \rightarrow 0} \frac{e^x - 1}{2x} \stackrel{\frac{0}{0}}{=} \lim_{x \rightarrow 0} \frac{e^x}{2} = \frac{1}{2}$$

Algorithm 0.1: CELSIUSTOFAHRENHEIT(c)

$f \leftarrow 9c/5 + 32$
return (f)

3. Bu bir açık uçlu sorudur öyle mi acaba? sdfsdfsdfsdfsd sdfsd fsd

Algorithm 0.2: MERGESORT(n, X)

comment: Sort the array X of length n

if $n = 2$

then $\left\{ \begin{array}{l} \text{if } X[0] > X[1] \\ \quad \text{then} \left\{ \begin{array}{l} T \leftarrow X[0] \\ X[0] \leftarrow X[1] \\ X[1] \leftarrow T \end{array} \right. \end{array} \right.$

else if $n > 2$

$\left\{ \begin{array}{l} m \leftarrow \lfloor n/2 \rfloor \\ \text{for } i \leftarrow 0 \text{ to } m-1 \\ \quad \text{do } A[i] \leftarrow X[i] \\ \text{for } i \leftarrow m \text{ to } n-1 \\ \quad \text{do } B[i] \leftarrow X[i] \\ \text{comment: Now sort the subarrays } A \text{ and } B \\ \text{MERGESORT}(m, A) \\ \text{MERGESORT}(n-m, B) \\ i \leftarrow 0 \\ j \leftarrow 0 \\ \text{for } k \leftarrow 0 \text{ to } n-1 \\ \quad \left\{ \begin{array}{l} \text{if } A[i] \leq B[j] \\ \quad \text{then} \left\{ \begin{array}{l} X[k] \leftarrow A[i] \\ i \leftarrow i+1 \end{array} \right. \quad (i) \\ \quad \text{else} \left\{ \begin{array}{l} X[k] \leftarrow B[j] \\ j \leftarrow j+1 \end{array} \right. \quad (ii) \end{array} \right. \end{array} \right.$

Algorithm 0.3: **if** (s)

omeconditionistrue

then $\left\{ \begin{array}{l} \text{somestatement} \\ \text{anotherstatement} \\ \text{yetanotherstatement} \end{array} \right.$

else if *someotherconditionistrue*

then $\left\{ \begin{array}{l} \text{somestatement} \\ \text{anotherstatement} \\ \text{yetanotherstatement} \end{array} \right.$

else if *someevenmorebizarreconditionismet*

then *dosomethingelse*

else *dothefaultactions*

