

1	<p>Bill has an algorithm, find2D, to find an element <math>x</math> in an <math>n \times n</math> array <math>A</math>. The algorithm find2D iterates over the rows of <math>A</math> &amp; calls the algorithm arrayFind on each row, until <math>x</math> is found or it has reached all rows of <math>A</math>. What is the worst case running time of find2D in terms of <math>n</math>?</p> <p>A) <math>n</math>                      B) <math>\log(n)</math>                      C) <math>n(\log(n))</math>                      D) <math>n^2</math></p>
2	<p>Where an item with the largest key will be stored in a min heap</p> <p>A) at the root                      B) at any internal node C) at any external node                      D) at any parent node</p>
3	<p>Generally for finding the complexity of an algorithm we find the time for</p> <p>A) best case    B) average case    C) Worst case    D) Mean case    E) Median case</p>
4	<p>In Preorder traversal</p> <p>A) First root is visited B) First left child is visited C) first right child is visited D) First leaf nodes are visited E) first external nodes are visited</p>
5	<p>Five items 1,2,3,4,5 are pushed in a stack in order starting from 1. The stack is popped four times &amp; popped elements are inserted in a queue then two elements are deleted from the queue &amp; pushed back in the stack. Now one element is popped from the stack, the popped element is</p> <p>A) 1   B) 2    C) 3    D) 4    E) 5</p>
6	<p>Find out the incorrect statement</p> <p>a) Accessing an element is easier in an array than in the list. b) Link list wastes memory in saving pointer addresses. c) Insertion and deletion is easy in arrays. d) Memory is wasted in arrays because all of the array may not be utilized</p>
7	<p>Worst case complexity of merge sort is</p> <p>A) <math>n(\log(n))</math>                      B) <math>\log(n)</math>    C) <math>n^2</math>                      D) <math>n</math></p>
8	<p>We interchange the values of variables <math>m</math> and <math>n</math>, using the replacement notation by <math>t \leftarrow m</math>, <math>m \leftarrow n</math>, <math>n \leftarrow t</math>. So we use three assignments. If we want to rearrange <math>(a,b,c,d)</math> to <math>(b,c,d,a)</math> by a sequence of replacements. The new value of <math>a</math> is to be the original value of <math>b</math> &amp; so on. How many assignments are required?</p> <p>A) 3                      B) 5                      C) 4                      D) 6</p>