Category	Value	Question	Answer
List, Stacks, Queues	100	This data structure supports FILO operations.	Stack
	200	The run time of insertion to the front of a linked list.	$O(1)$
	300	A priority queue is functionally the same as this data strucure.	Heap
	400	This is the best run time for deciding whether a linked list is circular.	$O(n)$
	500	This is the minmum space required to recursively reverse a linked list.	$O(n)$
Graph Algorithms	100	A graph with few edges relative to the number of nodes is called this.	Sparse
	200	Given a fully connected graph, this algorithm finds a set of edges that joins every node with minimum edge cost.	Prim's, Kruskal's, Jarnik's, Boruvka's
	300	For any graph, a fully connected minimum spanning tree with n nodes has this many edges.	n -1
	400	This graph operation may be used to detect cycles.	Topological sort
	500	This graph representation allow's Prim's algorithm to have a run time of $O(E \log(V))$.	Adjacency list
Java/Object Oriented Programming	100	All Java classes are subclasses of this class.	Object
	200	This library of the Java graphics package is built on top of AWT.	Swing
	300	This type is not valid as the parameter for a generic class.	Primitive type
	400	This is the primary difference between abstract classes and interfaces.	Interface requires that all methods be implemented. (Also: Multiple interfaces may be implemented by one class,)
	500	This allows Java to perform similarly across all platforms with little or no modification by the programmer.	Java Virtual Machine
Sorting	100	This interface is required for all sortable data sets.	<Comparable>.
	200	Java's Array.Sort uses this algorithm to achieve nlog(n) run time.	quickSort.
	300	This sorting algorithm uses O(1) space and has a worst case O(nlogn) running time.	heapSort.
	400	The right child of node i in a binary heap is this array index.	2i + 2.
	500	This array of integers cause quick sort with selecting the median of first, middle, and last element to run in O(n^2) time.	Highest element first, 2nd highest last, third highest in the middle. Keep on adding the next highest element in between the arrays.

Category	Value	Question	Answer
Trees	100	This is the name of set of trees with at most 2 children	binary
	200	This invariant guarantees that search for a binary tree is $O(\log(n))$	Left child < parent, right child > parent
	300	Daily Double!	
	400	An ASCII character is typically represented with 8 bits. However, a text file very rarely contain all 256 ASCII characters. This is a method used to encode ASCII characters with fewer than 8 bits.	Huffman Encoding/Tree.
	500	This is the time complexity of finding the median value of a binary search tree.	$O(n)$
Miscellaneous	100	This is the assumption for $P(n)$ for weak induction.	True for some $n = k$.
	200	This keyword is used to make methods thread safe (for a particular object).	synchronized
	300	This is the recurrence for linear search on a linked list of length n.	$T(n) = 1 + T(n-1)$
	400	Recursive procedure calls are executed in this portion of the memory.	the stack
	500	This algorithm has the following recurrence: $T(n) = O(n) + 3T(n/3)$	3-way quick sort