Week 8 Review Collections **(solutions)**

1) When a generic method is called, A) the compiler uses information explicitly specified by the programmer, if available; otherwise, the type defaults to ObjectB) the programmer must explicitly specify the actual types to use for the type parameters**C) the compiler determines the actual types to use for the type parameters from the context**D) None of the above

2) The three major categories of Java collections are **A) lists, sets, and maps**

B) tree sets, list sets, and hash mapsC) hash lists, hash tables, and sets

D) sets, collections, and maps

3) A Java collection

**A) is an object that is is used as a container for other objects**B) is an abstract class in the java.collect packageC) is a class that is defined in the java.awt packageD) None of the above

4) A collection whose elements are pairs of keys and values is called

A) an enumerator **B) a map** C) a paired collection D) a hash list

5) A collection that does not impose a positional order on its elements, and does not allow duplicates is called a A) non-positional map B) hash map C) linked list **D) set**6) A collection that stores its elements in an (ordered) sequence, and allows access to each element by its position in the sequence is called a A) positional map **B) list** C) map D) ordered set7) Which of the following is true?

A) A set allows duplicate values to be stored**B) A list allows duplicate values to be stored**C) A map allows duplicate keys to be storedD) No Java collection allows duplicate values to be stored8) An entry in a map

A) may not share a key value with any other entry in the mapB) is called a mappingC) associates a key with a value**D) All of the above**

9)To compare two objects,

A) Use the ==, e.g. object1 == object2

**B) Use an equals method to make a field by field comparison of the two objects**

C) write a method to do a byte-by-byte compare of the two objects

D) Since objects consist of several fields, you cannot compare them.

10) What are some inefficiencies accomplished with a bad OOP design? Name at least two.

**Added burdens of unneeded complexity. As size grows & complexity system resources slow down.**

LinkedLists

1. In a linkedlist which node holds the first node value in the list?
2. Head
3. First
4. Tail
5. Null
6. **A or B**

2. As a data structure each node holds both a \_\_\_\_\_ and a \_\_\_\_\_\_.

1. Node,value
2. Node,list
3. **Value,reference**
4. Null, list

3. What type of data can nodes reference?

1. A singular value
2. An array
3. Any object
4. **All of the above**

4. The last link in a linked list must point to a **null** value?

5. Consider the following linkedlist.



What does the value of head contain? See answers below

What does the value of head.info contain? See answers below

What does the value of head.link contain? See answers below

What does the value of head.link.info contain? See answers below

