SI: Interfaces and Generics

1. All interface methods are \_\_\_\_\_\_ and \_\_\_\_\_\_. Why does this make sense?
2. If Iterable is an interface is this a legal statement? Why or why not?

Iterable it = new Iterable();

1. If Iterable is an interface and MyIterator is a normal class, is this a legal statement? Why or why not?

Iterable it = new MyIterator();

1. What is an API and how do interfaces relate?
2. When a class implements an interface what must it do?
3. How many interfaces can a class implement?
4. Let’s say I have two interfaces that define the constant PI. Can a class implement both of these interfaces? Why or why not?
5. Can an interface extend another interface?
6. Which, if any, of these statements are incorrect?

List myList = new ArrayList();

ArrayList<Integer> arrList = new ArrayList<Integer>();

List<Integer> list = new ArrayList<>();

List<Double> aList = new List<>();

1. If we have the class Cage:

public abstract class Cage<T extends Animal> {

    abstract void addAnimal(T animal)

}

Will the following code compile?

Cage<Object> objectCage;