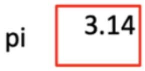
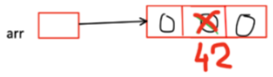
Box& pointer Practice

Q1. double pi = 3.14;



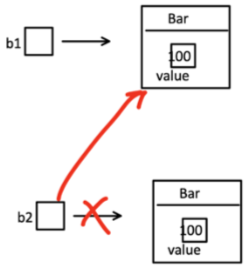
Q2.

```
 int[] arr = new int[3];
arr[1] = 42;
```

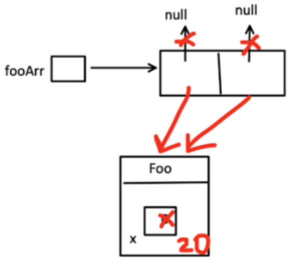


Q3.

```
class Bar {
   public int value;
   public Bar() {
      value = 100;
   }
}

Bar b1 = new Bar();
Bar b2 = new Bar();
b2 = b1;
```



```
Q4 class Foo {
   public int x;
   public Foo() {
      x = 0;
   }
}

Foo[] fooArr = new Foo[2];
fooArr[0] = new Foo();
fooArr[1] = fooArr[0];
fooArr[0].x = 20;
```

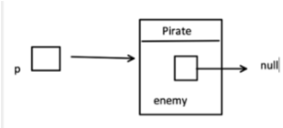


Use the following classes:

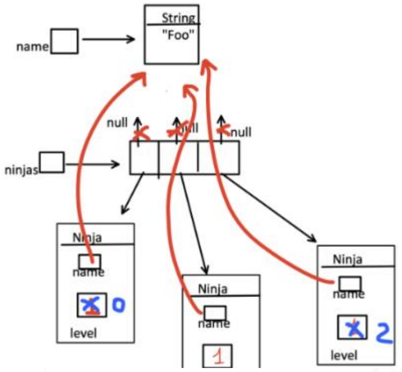
```
class Ninja {
      private String name; private int level;

      public Ninja(String name) { this.name =
              name; this.level = 1;
      }

      public void setLevel(int level) { this.level = level;
      }
}
```

```
class Pirate {
        private Ninja enemy;

        public Pirate(Ninja n) { this.enemy =
                n;
        }

        public Pirate() {
              this.enemy = new Ninja("Foo");
        }
}
```

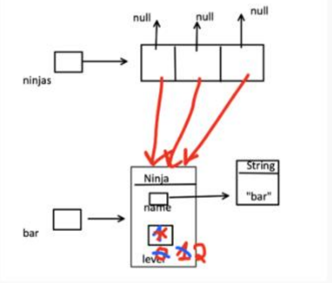
Q5. Pirate p = new Pirate(null);



Q6. String name = "Foo"; Ninja[] ninjas = new Ninja[3]; for(int i = 0; i < 3; i++) {
    ninjas[i] = new Ninja(name); ninjas[i].setLe
}



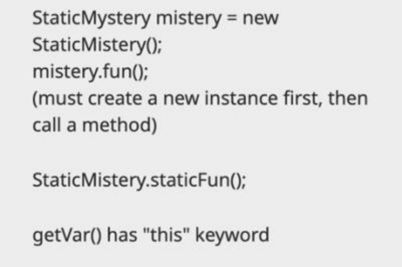
Q7. Ninja bar = new Ninja("Bar"); Ninja[] ninjas = new Ninja[3]; for(int i = 0; i < 3; i++) {
    ninjas[i] = bar; ninjas[i].setLevel(i);
}



Q8. Use the following code to answer the next three questions:

```
public class StaticMystery{ private String
        var;
        public StaticMystery(String var){
                this.var = var;
        }
        public String getVar(){
                return this.var;
        }
        public void fun(){
                //cool code
        }
        public static void staticFun(){
                //more cool code
        }
        public static void main(String[] args) {

        }
}
```

Write code you would put in main to call fun() (hint: it's not static, so you'll need to construct an object first)



StaticMystery mistery = new StaticMistery();
mistery.fun();
(must create a new instance first, then call a method)

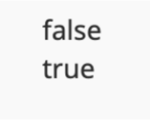
StaticMistery.staticFun();

getVar() has "this" keyword

Write code you would put in main to call staticFun()

Why couldn't you change the function getVar() to be static?

Q9. What gets printed when you execute the following code:



false
true

```
HashMap<Integer, String> map1 = new HashMap<Integer, String>();
HashMap<Integer, String> map2 = new HashMap<Integer, String>();
map1.put(1, "One");
map2.put(1, "One");

System.out.println("map1 == map2: " + (map1 == map2));          output:_____________

System.out.println("map1.equals(map2): " + map1.equals(map2));    output:_____________
```