Question 1. Draw a memory diagram that shows the state of the program at the end.

```java
public class ThunderStorm {
    private int[] temperature;

    public ThunderStorm(int[] temp) {
        this.temperature = temp;
    }

    public String toString() {
        return String.format("Low: %d, High: %d",
                this.temperature[0], this.temperature[1]);
    }
}
```

```java
public class ThunderStormDriver {
    public static void main(String[] args) {
        int[] range;
        range = new int[2];
        range[0] = 59;
        range[1] = 75;

        ThunderStorm thunderStorm;
        thunderStorm = new ThunderStorm(range);

        range[0] = 80;
        range[1] = 90;

        System.out.println(thunderStorm);
    }
}
```

What will be printed by `main()`?

Question 2. Draw a memory diagram that shows the state of the program at the end.

```java
1  public class RainStorm {
2      private int[] temperature;
3
4      public RainStorm(int[] temp) {
5          this.temperature = new int[2];
6          this.temperature[0] = temp[0];
7          this.temperature[1] = temp[1];
8      }
9
10     public String toString() {
11         return String.format("Low: %d, High: %d",
12                 this.temperature[0], this.temperature[1]);
13     }
14 }
```

```java
1  public class RainStormDriver {
2      public static void main(String[] args) {
3          int[] range;
4          range = new int[2];
5          range[0] = 59;
6          range[1] = 75;
7
8          RainStorm rainStorm;
9          rainStorm = new RainStorm(range);
10
11         range[0] = 80;
12         range[1] = 90;
13
14         System.out.println(rainStorm);
15     }
16 }
```

What will be printed by `main()`?

Question 3. Draw a memory diagram that shows the state of the program at the end.

```java
1  public class IceStorm {
2      private int[] temperature;
3
4      public IceStorm(int[] temp) {
5          this.temperature = new int[2];
6          this.temperature = temp;
7      }
8
9      public String toString() {
10         return String.format("Low: %d, High: %d",
11                 this.temperature[0], this.temperature[1]);
12     }
13 }
```

```java
1  public class IceStormDriver {
2      public static void main(String[] args) {
3          int[] range;
4          range = new int[2];
5          range[0] = 59;
6          range[1] = 75;
7
8          IceStorm iceStorm;
9          iceStorm = new IceStorm(range);
10
11         range[0] = 80;
12         range[1] = 90;
13
14         System.out.println(iceStorm);
15     }
16 }
```

What will be printed by `main()`?

Question 4. Draw a memory diagram that shows the state of the program at the end.

```java
1  public class HailStorm {
2      private int[] temperature;
3
4      public HailStorm(int[] temp) {
5          this.temperature = temp;
6          this.temperature = new int[2];
7      }
8
9      public String toString() {
10         return String.format("Low: %d, High: %d",
11                 this.temperature[0], this.temperature[1]);
12     }
13 }
```

```java
1  public class HailStormDriver {
2      public static void main(String[] args) {
3          int[] range;
4          range = new int[2];
5          range[0] = 59;
6          range[1] = 75;
7
8          HailStorm hailStorm;
9          hailStorm = new HailStorm(range);
10
11         range[0] = 80;
12         range[1] = 90;
13
14         System.out.println(hailStorm);
15     }
16 }
```

What will be printed by `main()`?