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Chapter 7 Review Problems

R7.3

a.) [1, 1, 1, 1, 1, 1, 1, 1, 1, 1]
b.) [1, 1, 2, 3, 4, 5, 4, 3, 2, 1]
c.) [2, 3, 4, 5, 4, 3, 2, 1, 0, 0]
d.) [0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
e.) [1, 3, 6, 10, 15, 19, 22, 24, 25, 25]
f.) [1, 0, 3, 0, 5, 0, 3, 0, 1, 0]
g.) [1, 2, 3, 4, 5, 1, 2, 3, 4, 5]
h.) [1, 1, 2, 3, 4, 4, 3, 2, 1, 0]

R7.5

```
int[] values = {-1,2,3,4,21,6,7,8,9,10};

int max = values[0];
int min = values[0];
for(int element: values){
        if (element > max){
                max = element;
        }
        if (element < min){
                min = element;
        }
}
System.out.println("Max: "+ max + "  Min: "+ min);
```

R7.22

```
int[] newValues = {1,1,2,2,2,2,2,2,3,3,3,3,4,5,6,6,6,6,6,6,6}

int maxRun = 0
int previous = first element
int counter = 1
for each index in array {
        if (newValues[index] == previous){
                counter++
```

```
            }
            else{
                counter = 1
            }
            previous = newValues[index]

            if (counter > maxRun){
                maxRun = counter
            }
        }
        System.out.println("Max Run: " + maxRun);
```

R7.24

- use the minimum value algorithm on the y-coordinate array
- set that value equal to Ymin
- use the maximum value algorithm on the y-coordinate array
- set that value equal to Ymax
- execute the same two algorithms on the x-coordinate array
- set the values to Xmin and Xmax respectively
- the four coordinates that make up the corners of the smallest enclosing rectangle are as follows (Xmin,Ymax), (Xmax,Ymax), (Xmin,Ymin), (Xmax,Ymin)

R7.33

a.)True
b.)True
c.)False
d.)True
e.)False
f.)False