r6.2 Consider the following array:
int a[] = { 1, 2, 3, 4, 5, 4, 3, 2, 1, 0 };
What is the value of total after the following loops complete?

c. int total = 0;
for (int i = 1; i < 10; i = i + 2) { total = total + a[i]; }

sol
total equals 12.

r6.3 Consider the following array:
int a[] = { 1, 2, 3, 4, 5, 4, 3, 2, 1, 0 };
g. for (int i = 0; i < 5; i++) { a[i + 5] = a[i]; }

sol
{1, 2, 3, 4, 5, 1, 2, 3, 4, 5}

r6.5 Write C++ code for a loop that simultaneously computes both the maximum and minimum of an array.

Sol

```cpp
int numbs[10] = {10, 7, 4, -2, 22, 8, 5, 2, 0, 3};
int max = numbs[0];
int min = numbs[0];

for (int j = 1; j < 10; j++)
{
    if (numbs[j] < min)
    {
        min = numbs[j];
    }

    if (numbs[j] > max)
    {
        max = numbs[j];
    }
}
```
What is wrong with the following loop?

```c
int values[10];
for (int i = 1; i <= 10; i++)
{
    values[i] = i * i;
}
```

Explain two ways of fixing the error.

```
sol
The problem with this loop is that it tries to access a location outside of the bounds of the array. The array has 10 locations, numbered 0 through 9, but this code tries to access `values[10]`, which doesn’t exist. It also starts with position 1 of the array, which is probably not what was intended (because arrays start at position 0, not 1).

The first way to fix it is to change the “1” to a “0” and the “<=” to “<” in the loop condition:

```c
int values[10];
for (int i = 0; i < 10; i++) { values[i] = i * i; }
```

The second way to fix it is to change the “1” to “0” and the “10” to “9” in the loop condition:

```c
int values[10];
for (int i = 0; i <= 9; i++) { values[i] = i * i; }
```
r6.9 Write a loop that reads ten numbers and a second loop that displays them in the opposite order from which they were entered.

```cpp
int my_array[10];
for (int i = 0; i <= 9; i++)
{
    cout << "Enter a number: ";
    cin >> my_array[i];
}

for (int j = 9; j >= 0; j--)
{
    cout << my_array[j] << " ";
}
```