

**DO NOT USE THE COMPUTER, C++ COMPILER, OR THE INTERNET FOR HELP WITH THESE EXERCISES.  
SHOW SCRATCHWORK ON THIS PAPER.**

Trace the following code segments and show the output.

```
//1
    list<int> numbers;

    for (int j = 0; j <= 5; j++)
        numbers.insert(numbers.begin(), j);

    list<int>::iterator i;
    i = numbers.begin();
    cout << *i << ' ';
    cout << endl;
```

```
//2
    deque<int> deqTest;
    deqTest.push_front(1);
    deqTest.push_front(2);
    deqTest.push_front(3);

    for (int i = 0; i < deqTest.size(); i++)
        cout << deqTest[i] << ' ';

    cout << endl;
```

```
//3
    priority_queue<int> pq;
    pq.push(10);
    pq.push(9);
    pq.push(20);
    cout << pq.top() << " ";
    cout << pq.top() << endl;
```

```
//4
    pq.empty();
    pq.push(1);
    pq.push(9);
    pq.push(2);

    while (!pq.empty())
    {
        cout << pq.top() << " ";
        pq.pop();
    }
```

```
//5
    priority_queue<string> pq1;
    pq1.push("A");
    pq1.push("B");
    pq1.push("C");

    while (!pq1.empty())
    {
        cout << pq1.top() << " ";
        pq1.pop();
    }
```