

Question 1. What is the output of this code segment?

```
stack<int> s, t;
s.push(68);
s.push(25);
s.push(99);
s.push(46);
s.push(72);
s.push(13);
int x = 0;
int len = s.size() - 3;
for (int i = 1; i <= len; ++i)
{
    x = s.top();
    s.pop();
    t.push(x);
}
len = s.size() - 3;
for (int i = 1; i <= len; ++i)
{
    x = t.top();
    t.pop();
    s.push(x);
}
cout << x;
```

Question 2. What is the output of this code segment?

```
void check(vector<int>& v, int sum)
{
    int size = static_cast<int>(v.size());
    for (int i = 0; i < size; ++i) sum += v[i];
}
int main()
{
    vector<int> v;
    int sum = 0;
    for (int cnt = 0; cnt < 3; ++cnt) v.push_back(cnt + 1);
    check(v, sum);
    sum += v[2];
    cout << sum;
    return 0;
}
```

Question 3. What is the output of this code segment?

```
vector<int> v = { 2, 5, 4, 4, 5, 9, 7, 2, 4, 9, 7, 5 };
vector<int>::iterator iter = v.begin() + 1;
int i = 0;
while (i < 3)
{
    ++iter;
    cout << iter[3];
    cout << *(iter + 2);
    iter += 2;
    ++i;
}
```

ANSWERS

1	46
2	3
3	954257

Question 1. What is the output of this code segment?

```
queue<int> q, t;
q.push(81);
q.push(35);
q.push(27);
q.push(78);
q.push(14);
int x = 0;
int len = q.size() - 2;
for (int i = 1; i <= len; ++i)
{
    x = q.front();
    q.pop();
    t.push(x);
}
len = q.size() - 2;
for (int i = 1; i <= len; ++i)
{
    x = t.front();
    t.pop();
    q.push(x);
}
cout << x;
```

Question 2. What is the output of this code segment?

```
void check(vector<int>& v, int sum)
{
    int size = static_cast<int>(v.size());
    for (int i = 0; i < size; ++i) sum += v[i];
}
int main()
{
    vector<int> v;
    int sum = 0;
    for (int cnt = 1; cnt < 4; ++cnt) v.push_back(cnt + 1);
    check(v, sum);
    sum += v[2];
    cout << sum;
    return 0;
}
```

Question 3. What is the output of this code segment?

```
vector<int> v = { 2, 5, 4, 4, 5, 9, 7, 2, 4, 9, 7, 5 };
vector<int>::iterator iter = v.begin() + 1;
int i = 1;
while (i < 4)
{
    ++iter;
    cout << iter[2];
    cout << *(iter + 1);
    iter += 2;
    ++i;
}
```

ANSWERS	
1	27
2	4
3	542779

Question 1. What is the output of this code segment?

```
int a = 6, b = 3, c = 5;
stack<int> s;
s.push(a);
s.push(b);
s.push(c);
++a;
a = s.top();
s.pop();
s.push(b);
s.push(a);
c = a;
s.push(c);
while (!s.empty())
{
    a = s.top();
    s.pop();
    cout << a;
}
```

Question 2. What is the output of this code segment?

```
void check(vector<int> v, int& sum)
{
    int size = static_cast<int>(v.size());
    for (int i = 1; i < size; ++i) sum += v[i];
}
int main()
{
    vector<int> v;
    int sum = 0;
    for (int cnt = 0; cnt < 4; ++cnt) v.push_back(cnt + 1);
    check(v, sum);
    sum += v[2];
    cout << sum;
    return 0;
}
```

Question 3. What is the output of this code segment?

```
vector<int> v = { 2, 5, 4, 7, 2, 4, 9, 7, 5, 4, 5, 9, 7 };
vector<int>::iterator iter = v.begin() + 1;
int i = 1;
while (i < 4)
{
    ++iter;
    cout << iter[1];
    cout << *(iter + 3);
    iter += 2;
    ++i;
}
```

ANSWERS	
1	55336
2	12
3	749549