

2-1 Given code below:

```
vector<int> v;
for ( int i=0; i<4; i++ ) {
    v.push_back(i+1);
}
cout << v.size();
```

把1号元素加进去，不是在1号索引加元素

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The output should be: (2分)

- ☐ A. 1
- ☐ B. 2
- ☐ C. 3
- ☒ D. 4

2-1 Accepted (2 point(s))

2-2 About virtual function, which statement below is correct? (2分)

- ☐ A. Virtual function is a static member function
- ☐ B. Virtual function is not a member function
- ☒ C. Once defined as virtual, it is still virtual in derived class without virtual keyword,.
- ☐ D. Virtual function can not be overloaded.

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2-2 Accepted (2 point(s))

2-3 It is better to choose ____ when the function is not complecated and is to be called frequently. (2分)

- ☐ A. overloaded function
- ☒ B. inline function
- ☐ C. recuisive function
- ☐ D. embedded function

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2-3 Accepted (2 point(s))

2-4 Suppose that statement3 throws an exception of type Exception3 in the following statement: (2分)

```
try {
    statement1; statement2; statement3; }
catch (Exception1 ex1) {}
catch (Exception2 ex2) {}
catch (Exception3 ex3) { statement4; throw; }
statement5;
```

如果 catch(Exception3 ex3) 中有 throw; 语句，那么 statement4 会被执行，然后异常会被重新引发，控制流不会执行 statement5；
如果 catch(Exception3 ex3) 中没有 throw; 语句，那么 statement4 会被执行，然后控制流会继续执行 statement5。

Which statements are executed after statement3 is executed?

- ☐ A. statement2
- ☐ B. statement3
- ☒ C. statement4
- ☐ D. statement5

选D
std::vector<double> v; // 声明一个 double 类型的 vector
v.push_back(2.5); // 向 vector 尾部添加元素 2.5

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2-4 Accepted (2 point(s))

2-5 What is wrong in the following code?

```
vector v; v[0] = 2.5; (2分)
```

- ☒ A. The program has a compile error because there are no elements in the vector.
- ☐ B. The program has a compile error because you cannot assign a double value to v[0].
- ☐ C. The program has a runtime error because there are no elements in the vector.
- ☐ D. The program has a runtime error because you cannot assign a double value to v[0].

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2-5 Wrong Answer (0 point(s))

2-6 Given:

```
template <class T>
void max(T a, T b, T &c)
{
    c = a+b;
}
```

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Which code fragement below is correct? (2分)

- ☐ A. `int x,y;char z;max(x,y,z);`
- ☒ B. `double x,y;double z;max(x,y,z);`
- ☐ C. `int x,y;float z;max(x,y,z);`
- ☐ D. `float x,y;double z;max(x,y,z);`

2-6 Accepted (2 point(s))

2-7 About `const` data member, which statement below is correct? (2分)

- ☐ A. `const` member can be defined without any initialization, and can not be modified.
- ☒ B. `const` member has to be initialized, and can not be modified.
- ☐ C. `const` member can be defined without any initialization, and can be modified later.
- ☐ D. `const` member has to be initialized, and can be modified later.

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2-7 Accepted (2 point(s))

2-8 Which operator below can not be overloaded? (2分)

- ☐ A. `&&`
- ☐ B. `[]`
- ☒ C. `::`
- ☐ D. `<<`

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2-8 Accepted (2 point(s))

2-9 Which one below can NOT be overloaded? (2分)

- ☐ A. member function
- ☐ B. free function (global function)
- ☒ C. destructor
- ☐ D. constructor

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2-9 Accepted (2 point(s))

2-10 About `delete` operator, which statement below is NOT correct? (2分)

- ☐ A. Only pointers as the result of a `new` opertion can be used to be `delete` d.
- ☐ B. Destructor will be called automatically during the `delete` operation.
- ☒ C. It is safe to `delete` the same pointer multiple times.
- ☐ D. There's only one pair of `[]` followed to `delete` a multi-dimension array.

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2-10 Accepted (2 point(s))