Q-16

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	22 minutes	10.33 out of 15

⚠ Correct answers are hidden.

Submitted Jul 20 at 7:52pm

Question 1   0.5 / 0.5 pts

Assuming that `Star` is a structure, the declaration: `vector<Star> stars(3);` creates three default initialized `Star` objects.

- ⦿ True
- ○ False

Question 2   0.5 / 0.5 pts

The declaration: `vector<string> v{"bill", "bob", "sally"};` creates a `vector` containing three `string` objects.

- ⦿ True
- ○ False

Question 3   1 / 1 pts

Assume `vector<double> speed(5);` Which line throws a ***runtime error***?

- ○ `speed.erase(speed.begin());`
- ○ `speed[0] = speed.back()`
- ○ `cout << speed[5];`
- ○ `speed.front() = 12;`
- ⦿ None of these

Question 4   1 / 1 pts

Which line of code can be added to print the value 4?

```
int main()
{
    struct S {int a, b; };
    vector<S> v;
    S s{3, 4};
    v.push_back(s);
    // Add code here
}
```

- ○ `cout << v.b.at(0) << endl;`
- ○ `cout << v.b << endl;`
- ○ None of these
- ⦿ `cout << v.at(0).b << endl;`
- ○ `cout << v[0][0] << endl;`

Incorrect   ### Question 5   0 / 1 pts

What is stored in `data` after this runs?

```
vector<int> data{1, 2, 3};
data.pop_back(0);
```

- ○ `[2, 3]`
- ⦿ `[1, 2]`
- ○ `[1, 2, 3, 0]`

○ None of these

○ [1, 2, 3]

○ []

Incorrect **Question 6**   0 / 1 pts

What prints?

```cpp
void f(const vector<int>& v)
{
    v.at(0) = 42;
}
int main()
{
    vector<int> x{1, 2, 3};
    f(x);
    cout << x.at(0) << endl;
}
```

○ 1

○ Nothing; compile-time error.

◉ 42

○ Nothing; linker error

○ Nothing; run-time error.

Incorrect **Question 7**   0 / 1 pts

What prints?

```cpp
vector<int> v{1, 2, 3, 4, 5};
v.pop_back();
cout << v.front() << endl;
```

○ Nothing; compile-time error.

○ 5

○ Nothing; run-time error.

○ 1

◉ 4

Question 8   1 / 1 pts

What is stored in `data` after this runs?

```cpp
vector<int> data{1, 2, 3};
data.back();
```

○ [1, 2, 3, 0]

○ None of these

○ [1, 2]

○ []

○ [2, 3]

◉ [1, 2, 3]

Incorrect **Question 9**   0 / 1 pts

Which of these are true?

```cpp
int main()
{
    vector<int> v{1, 2, 3};
    for (size_t i = v.size() - 1; i >= 0; i--)
        cout << v.at(i) << " ";
    cout << endl;
}
```

☐ Crashes when run

☐ Compiler error (does not compile)

☐ Issues a compiler warning, but no error

☐ Prints 3 2 1

☑ Endless loop (may crash, but not necessarily)

Partial

Question 10

0.33 / 1 pts

Which of these are true?

```cpp
int main()
{
    vector<int> v{1, 2, 3};
    for (auto i = v.size() - 1; i >= 0; i--)
        cout << v[i] << " ";
    cout << endl;
}
```

☐ Compiler error (does not compile)

☐ Endless loop (will likely crash, but not necessarily)

☑ Crashes when run

☑ Issues a compiler warning, but no error

☑ Prints 3 2 1

Question 11

1 / 1 pts

To count the number of elements in a `vector` that match a particular value, use the STL function:

○ find

○ count_if

◉ count

○ search

○ minmax_element

Question 12

1 / 1 pts

Examine the following code. Which element is erased?

```cpp
vector<int> v{1, 2, 3};
v.erase(end(v));
```

◉ Compiles but no element is erased

○ 2

○ Does not compile

○ 3

○ 1

Question 13

1 / 1 pts

Assuming the following variable definition, which statement creates an object which refers to a position immediately following the last element in **v** and which prohibits you from changing **v**?

```cpp
vector<double> v{1.2, 2.3, 3.4};
```

◉ auto d = cend(v);

○ auto b = end(v);

○ None of these

○ auto c = cbegin(v);

○ auto a = begin(v);

Question 14

1 / 1 pts

Examine the following code. Which element is erased?

```cpp
vector<int> v{1, 2, 3};
v.erase(begin(v) + 1);
```

○ Does not compile

○ Compiles but no element is erased

◉ 2

○ 3

○ 1

Question 15

1 / 1 pts

What is x?

```
vector<int> v{1, 2, 3};
auto x = max_element(v.begin(), v.end());
```

◉ an iterator

○ 1

○ 3

○ a std::pair object

○ None of these

Question 16

0.5 / 0.5 pts

The statement `v.insert(v.end(), 3)` appends the element 3 to the end of the `vector v`.

◉ True

○ False

Question 17

0.5 / 0.5 pts

Assume the `vector v` contains `[1, 2, 3]`. `v.erase(0);` is a syntax error.

◉ True

○ False