Find the Output of the C++ code segments. Assume that all things needed are included.

```
int main() {
    vector<int> vec;
    for (int i = 0; i < 5; i++) {
        vec.push back(i);
    vector<int>::iterator a;
    for (a = vec.begin(); a != vec.end(); a++)
{
        *a++;
    for (a = vec.end(); a != vec.begin(); a--)
        cout << *a << " ";
    cout << endl;</pre>
int main() {
    int *a = new int [10];
    for (int i = 9; i \ge 0; --i) {
        a[i] = i * 2;
    for (int i = 0; i < 10; i++) {
        cout << ++*a << endl;</pre>
int main() {
    int *a = new int[10];
    int b = \{5,4,3,2,1\};
    int *c = \&b[1];
    for (int i = 0; i < 10; i++) {
        *(a++) = i;
    }
    C++;
    a[2] += c;
    for (int i = 0; i < 10; i++) {
        cout << a[i] << " ";
    cout << endl;</pre>
int main() {
    int a = 0;
    for (int i = a; i < 10; i++) {
        for (int j = a + 1; j < 11; j++) {
            a++;
        }
    }
    cout << a << endl;</pre>
class A {
    int z;
    public:
        A(int a): z(a) {}
```

```
&A operator+(const &A ref) {
               this.z += ref.z;
               return *this;
           }
           ~A() {
               cout << z << endl;</pre>
  } foo(12);
  int main() {
      A b(23);
      b + foo;
  class A {
      public:
           A() {cout << "Constructed" << endl;}
           ~A() {cout << "Destructed" << endl;}
  int main() {
      A a, *b;
      for (int i = 0; i < 1; i++) {
          Ac;
       }
7 class A {
      protected:
           int z;
      public:
           A() : z(1) {}
          virtual void run() {}
           void peek() {cout << z << endl;}</pre>
  };
  class B : public A {
      int y;
      public:
          B(int a) : y(a - 1), z(a) {}
           void run() {cout << y << " " << z <<</pre>
  endl;}
  }
  int main() {
      A a, *c;
      B b(14);
      c = static_cast<A*>(&b);
      c.peek();
      b.run();
  char s = "Hello";
  int main() {
      int s = 500;
      cout << s++ << endl;
9 class A {
```

```
int a,b;
    public:
       A(int z, int x) : a(z), b(x) {
            if (x == 0) {
               throw "X is Zero";
            }
        }
}
int main() {
   int a = 500;
   int b = 0;
   try {
       A c(a, b);
    } catch (char* e) {
       cout << e << endl;
    }
```

Find the Errors in the C++ Code Segments

```
1 int a;
   a += 4;
  cout << a << endl;</pre>
2 \mid \text{int *a} = \{0, 1, 2, 3, 4, 5\};
  for (int i = 0; i < 6; i++) {
       *(++a) = 2;
  cout << a[2] << endl;</pre>
3 const int foo = 9000;
  foo++;
4 int *a = new int[3];
  for (int i = 0; i < 3; i++) {
       a[i] = i - 1;
   delete a;
   for (int i = 0; i << 3; i++) {
      cout << a << " ";
5 class A{
      int a = 0;
       public:
          A() {}
  class B {
      int b = 1;
      public:
          A() {}
   int main() {
      A *a;
       B b;
       a = \&b;
6 class B {
```

```
int swe = 234;
  public:
     B(int a) : swe(a);
}

7 class A {
    int f;
    A() {}
    ~A() {cout << "Destructed" << endl;}
}

8 int a = 5;
    cout << ++a << " " << a++ <<endl;
9 void foo(int a) const {
    a++;
    for (int i = 0; i < a; i++) {
        cout << "240";
    }
}</pre>
```