for\_each.cpp Page 1

```
#include <iostream>
#include <iterator>
#include <vector>
#include <algorithm>
#include <functional>
using namespace std;
template<typename T>
struct Sum {
 using value_type = T;
  T sum;
  Sum() : sum{} {}
  void operator()(T i) {
    sum += i;
  }
};
template<typename T>
void print(T val) {
 cout << val << " ";
int main() {
  vector<int> numbers{2, 4, 6, 7, 10, 12, 14, 16, 18, 20};
  std::function<void (int)> printFunction(&print<int>);
  for_each(begin(numbers), end(numbers), printFunction);
  cout << endl;
  for_each(begin(numbers), end(numbers), [](int& i){ i += 1;});
  Sum<int> sum = for_each(begin(numbers), end(numbers), Sum<int>());
  cout << sum.sum << "\n";</pre>
  return 0;
```