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Passing by reference

We've seen pass-by-reference versus pass-by-value

In C++, when passing objects (class or struct variables), we usually choose to pass by reference

- const reference if modification is not permitted
- Normal reference otherwise

What's the difference?

```
int sum(vector<int> vec) { ... };

int sum(const vector<int>& vec) { ... };
```

Passing by reference

```
// Creates a copy of vec
int sum(vector<int> vec) { ... };

// *Does not* create a copy of vec
int sum(const vector<int>& vec) { ... };
```

Second form avoids making a (potentially expensive) copy

We also pass by reference for *dynamic binding*, as we'll discuss later