

Addition Operators Solutions

Plus Operator Summary

- What is the prototype of the addition operator?

`T operator +(const T& lhs, const T& rhs);` // Addition operator for type T

- How is it invoked?

- Whenever we write a statement such as

`a + b;`

- The compiler will generate code which calls the operator with the appropriate arguments
 - The operator is a non-member function, so it will be called as
`operator+(a, b);`

`+=` Operator Summary

- What is the prototype of the `+=` operator?

`T operator +=(const T& rhs); // Compound addition operator for type T`

- How is it invoked?

- Whenever we write a statement such as

`a += b;`

- The compiler will generate code which calls the operator with the appropriate argument
 - The operator is a member function, so it will be called as
`a.operator+=(b);`

Basic Complex Number Class

- Write a definition of a simple class that implements the plus and += operators
- Write a program to test your operators and check that they give the correct answers
- Check that your + operator works correctly if a type conversion is needed for one of its arguments (e.g. adding a Complex object and an int)