|  | Points | Deducted | Comments |
| --- | --- | --- | --- |
| Complex Implementation: Member Functions |  |  |  |
| 3 Constructors | 6 |  |  |
| Copy Constructor | 5 |  |  |
| Assignment Operator | 5 |  |  |
| Complex Operators (two objects) += -= \*= /= | 20 |  |  |
| Complex Operators (constant) += -= \*= /= | 20 |  |  |
| Accessors: real, imag, magnitude | 9 |  |  |
| Complex Implementation: Free Functions |  |  |  |
| Addition (z1+z2, z1+c, c+z1) | 9 |  |  |
| Subtraction (z1-z2, z1-c, c-z1) | 9 |  |  |
| Multiplication (z1\*z2, z1\*c, c\*z1) | 9 |  |  |
| Division(z1/z2, z1/c, c/z1) | 9 |  |  |
| operator+ | 3 |  |  |
| operator- | 3 |  |  |
| operator== | 4 |  |  |
| operator!= | 4 |  |  |
| operator>> | 10 |  |  |
| operator<< | 5 |  |  |
| magnitude | 3 |  |  |
| real | 3 |  |  |
| imag | 3 |  |  |
| conj | 4 |  |  |
| norm | 4 |  |  |
| polar (r, theta) | 10 |  |  |
| polar (r) | 5 |  |  |
| arg(z) | 10 |  |  |

|  | Points | Deducted | Comments |
| --- | --- | --- | --- |
| Testing |  |  |  |
| >> | 4 |  |  |
| << | 4 |  |  |
| Assignment Operator | 4 |  |  |
| Complex Math Operators with objects (4 tests) | 16 |  |  |
| Complex Math operators with constants (4 tests) | 16 |  |  |
| Math infix operators with constants (4 tests) | 16 |  |  |
| Polar magnitude computation | 8 |  |  |
| Polar arg (theta) computation | 8 |  |  |
| Polar coordinates | 8 |  |  |
| Chained Computation (f()) – 5 tests | 15 |  |  |
| User Additional Tests | 20 |  |  |

Comments: