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| **LG #** | **P09** | **Standards:** | **N-CN.1.3, N-CN.2.4, N-CN.2.5** |
| **4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond instruction to the standard.**  **The student will be able to:**   * Prove DeMoivre’s Theorem.   **No major errors or omissions regarding the score 4.0 content.** | | |
| **3.5** | In addition to 3.0, in-depth inferences and applications with partial success. | | |
| **3.0** | **Students will be able to represent complex numbers and their operations on the complex plane.**  **The student will be able to:**   * Use conjugates to find moduli and quotients of complex numbers(N-CN.1.3) * Represent complex numbers on the complex plane in polar form (including real and imaginary numbers) (N-CN.2.4) * Explain why the rectangular and polar forms of a given complex number represent the same number (N-CN.2.4) * Use properties of addition, subtraction, scalar multiplication, and conjugation of complex numbers for computation (N-CN.2.5)   **No major errors or omissions regarding the score 3.0 content (simple or complex).** | | |
| **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of 3.0 content. | | |
| **2.0** | **The student recognizes and describes specific terminology such as:**   |  |  |  | | --- | --- | --- | | * Conjugate | * Complex number | * Moduli | | * Complex Plane | * Argument | * Rectangular form | | * Polar form | * Imaginary numbers |  |   **The student will be able to:**   * Find the conjugate of a complex number (N-CN.1.3) * Represent complex numbers on the complex plane in rectangular form (N-CN.2.4) * Represent addition, subtraction, scalar multiplication, and conjugation of complex numbers geometrically on the complex plane (N-CN.2.5) | | |
| **1.5** | Partial knowledge of the score 2.0 content, but major errors or omissions regarding score 3.0 content. | | |
| **1.0** | With partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. | | |
| **0.5** | With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. | | |
| **0.0** | Even with help, no understanding or skill is demonstrated | | |