

The **AcroTeX** Software Development Team

dljslib

The complex Option

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A short quiz on complex numbers.

Quiz

1. $(3 + 3i) + (4 + 5i) =$

2. $(3 + 3i)(4 + 5i) =$

3. $(4 - 5i)(4 + 5i) =$

4. $\frac{2 + 3i}{1 + 2i} =$

5. $i^{22} =$

6. $(x + \sin(x)i) + (\cos(x) + xi) =$

7. $e^{\pi/3i} \cdot e^{-\pi/6i} =$

The next two questions use the response functions `ProcRespListComplex` and `ProcRespSetComplex` functions. A list or a set of complex answers is expected.

8. If $z = 4(\cos x + i \sin x)$, list the values of z^2 and z^3 , in that order.

9. Find all real and complex solutions of the equation $x^2 = -9$. Express your answer(s) in rectangular form $a + bi$.