

数学物理方法 章节 1

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Question 1

1. $(3 - \sqrt{3}i)(3 + \sqrt{3}i) = 3^2 + \sqrt{3}^2 = 12$
2. $(x - i\sqrt{y})(-x - 2i\sqrt{y}) = -x^2 - 2ix\sqrt{y} + ix\sqrt{y} - 2y$
 $= -x^2 - 2y - ix\sqrt{y}$
3. $\frac{3-4i}{4+3i} = \frac{(3-4i)(4-3i)}{25} = \frac{12-12-25i}{25} = -i$
4. $\frac{5i}{\sqrt{2}-\sqrt{3}i} = \frac{5i(\sqrt{2}+\sqrt{3}i)}{5} = -\sqrt{3} + \sqrt{2}i$

Question 2
