Writing Complex Conjugates (ALG.CN.06)

Write the complex conjugate of each complex number. Then multiply the number by its complex conjugate.

1. $1 - 6i$

2. $-4 + 3i$

3. $-7i$

4. $\sqrt{10}i$

5. $-2.5i$

6. $\dfrac{8}{3}i$

7. $-3 - \sqrt{2}i$

8. $1 + \sqrt{5}i$

9. $\sqrt{-40}$

10. $3\sqrt{-6}$

11. $\sqrt{3} - 2i\sqrt{6}$

12. $-7\sqrt{2} + \dfrac{3}{2}i$

13. What is the complex conjugate of a real number?

14. Show that the complex conjugate of the sum of two complex numbers $a + bi$ and $c + di$ is the sum of their complex conjugates.

15. Show that the complex conjugate of the product of two complex numbers $a + bi$ and $c + di$ is the product of their complex conjugates.