

## Multiplying Expressions with Complex Numbers (ALG.CN.13)

Multiply.

1.  $(x - 5i)(x + 5i)$       $x^2 + 25$

2.  $(x + \sqrt{10}i)(x - \sqrt{10}i)$       $x^2 + 10$

3.  $(2x - 3\sqrt{5}i)(2x + 3\sqrt{5}i)$       $4x^2 + 45$

4.  $(3x^2 + 6\sqrt{7}i)(3x^2 - 6\sqrt{7}i)$       $9x^4 + 252$

5.  $(x - 3 + 2i)(x - 3 - 2i)$       $x^2 - 6x + 13$

6.  $(x + 1 - 8i)(x + 1 + 8i)$       $x^2 + 2x + 65$

7.  $(2x + 3 - \sqrt{14}i)(2x + 3 + \sqrt{14}i)$       $4x^2 + 12x + 23$

8.  $(x - \sqrt{2} + \sqrt{3}i)(x - \sqrt{2} - \sqrt{3}i)$       $x^2 - 2\sqrt{2}x + 5$

9.  $(x - 1 - \sqrt{5} + \sqrt{3}i)(x - 1 + \sqrt{5} - \sqrt{3}i)$       $x^2 - 2x + 2\sqrt{15}i - 1$

10.  $(x^2 + 3x + 5 - 2i)(x^2 + 3x - 5 + 2i)$       $x^4 + 6x^3 + 9x^2 - 21 + 20i$