

Algebra II Class work 5-9/10

Topic: Complex Numbers

ANSWER KEY

Simplify:

1. $\sqrt{-144}$

2. $2 + \sqrt{-25}$

3. $6 - \sqrt{-12}$

4. $\sqrt{-4} + \sqrt{-49}$

5. Solve $4x - 8i = 12 + 2yi$ for real values of x and y .

6. i^{63}

7. i^0

8. i^{35}

9. i^{16}

10. $(3 - 2\sqrt{-18}) - (2 + 3\sqrt{-8})$

11. $(5 - 2i)(3 + 4i)$

12. $\frac{1 - 2i}{3i}$

13. $\frac{2 - 3i}{1 + i}$

14. $\frac{5 + 2i}{3 - i}$

Solve the following equations:

15. $x^2 + 27 = 0$

16. $x^2 + 81 = 0$

17. $4x^2 - 9 = -41$

18. $x^2 - 2x + 4 = 7$