

Name: _____ Date: _____ Band: _____

Algebra 2

Complex Numbers Homework

1. What is the imaginary unit i defined as and why do we need it?

2. For the complex number $5 + 2i$, the imaginary part is _____ and the real part is _____.

Find the square root of the number.

3. $\sqrt{-36}$

4. $\sqrt{-64}$

5. $\sqrt{-18}$

6. $\sqrt{-24}$

7. $2\sqrt{-16}$

8. $-3\sqrt{-49}$

9. $-4\sqrt{-32}$

10. $6\sqrt{-63}$

Find the values of x and y that satisfy the equation.

11. $4x + 2i = 8 + yi$

12. $3x + 6i = 27 + yi$

13. $-10x + 12i = 20 + 3yi$

14. $9x - 18i = -36 + 6yi$

15. $-12x + yi = 60 - 13i$

16. $54 - \frac{1}{7}yi = 9x - 4i$

17. $15 - 3yi = \frac{1}{2}x + 2i$