Name _____ Date _____

Mr. Schlansky Pre Calculus

Writing the Equation of a Quadratic Equation Given the Roots

Write an equation whose roots are:

1. $x = 3, x = -2$

2) $x = -1, x = -4$

3. $x = \frac{1}{2}, 2$

4. $x = -2, \frac{4}{3}$

5. $x = 6 \pm \sqrt{3}$

6. $x = -4 \pm \sqrt{6}$

7. $x = -2 \pm 5i$

8. $x = 3 \pm 6i$

9. $x = 2 \pm \sqrt{5}$

10. $x = \frac{1}{3}, \frac{-1}{2}$

11. $x = -4 \pm i$

12. $5 \pm 2\sqrt{3}$

13. Juan has been told to write a quadratic equation where the sum of the roots is equal to -3 and the product of the roots is equal to -9. Which equation meets these requirements?

1) $x^2 + 3x + 9 = 0$
2) $x^2 - 12x + 27 = 0$
3) $2x^2 + 6x - 18 = 0$
4) $(x + 3)(x + 9) = 0$

14. Which equation has the complex number $4 - 3i$ as a root?

1) $x^2 + 6x - 25 = 0$
2) $x^2 - 6x + 25 = 0$
3) $x^2 + 8x - 25 = 0$
4) $x^2 - 8x + 25 = 0$

15. For which equation is the sum of the roots equal to the product of the roots?

1) $x^2 + x + 1 = 0$
2) $x^2 + 3x - 6 = 0$
3) $x^2 - 8x - 4 = 0$
4) $x^2 - 4x + 4 = 0$