Name _____          Date _____
Mr. Schlansky                          Pre Calculus

# *Polynomial Equations with Irrational/Imaginary Solutions*

**Solve each of the following equations and express irrational answers in simplest radical form or simplest** $a + bi$ **form**

1. $x^3 + 2x^2 = 4x$

2. $x^3 + 3x = 2x^2$

3. $x^4 - 6x^2 = -8$

4. $3x^4 + 6x^3 + 3x^2 = 0$

5. $2x^3 + 58x = 20x^2$

6. $2x^3 - 3x^2 = -18x + 21$

7. $4x^3 - 10x^2 + 2x = 0$

8. $x^3 + 4x^2 - 2x = 8$

9. $x^4 - 4x^2 - 32 = 0$

10. $x^3 - 3x^2 - 5x + 15 = 0$

11. $3x^3 + 12x^2 = -6x$

12. $x^4 + 4x^3 + 4x^2 = -16x$

13. $2x^4 - 22x^2 + 36 = 0$

14. $3x^5 - 48x = 0$

15. $6x^3 + 18x^2 - 9x = 0$

16. $x^4 - 6x^2 - 27 = 0$