Name: _____ **Precalculus Unit 1, Lesson 1**

Aim: Review of Polynomials and Factoring

I. Do Now: Multiply.

1. $(x+2)(x-2)$
2. $(x+5)(x-5)$
3. $(x^2-1)(x^2-4)$
4. $\left(5-\sqrt{2}\right)\left(3+\sqrt{2}\right)$
5. $(x+2)(x^2-4x+4)$
6. $(x+2)^3$

II. Review of Factoring (factoring is the opposite of multiplying, just as division is the opposite of multiplication)

In 7 – 16, factor over the set of REAL NUMBERS. This means some factors could be irrational. If not factorable, state "unfactorable."

7. $9x^2-25$
8. $9x^4-25y^2$
9. $(x-5)^2-4$
10. x^4+8x^2-9
11. x^2-4
12. x^2+4
13. $a^2-8a+16$
14. $(x+2)^2-36$
15. x^4+3x^2-4
16. x^2-7
17. Multiply: $(x+2)(x^2-5x+1)$