NAME:_____

SEC 6.1 FACTORING

Read section 6.1 and answer these questions

   1.   Complete this sentence: " To *factor* a polynomial is to find an equivalent expression that is a _____ ".

   2.   Read the "Tips for Factoring" box and tell me what you do first when factoring a polynomial.

   3.   What do you factor out if the leading coefficient is negative?

   4.   State two ways to check a factorization.

DO THESE PROBLEMS, page 368: 15-25 ODD; 37-42; 43-55, ODD

SEC 6.2 FACTORING TRINOMIALS

1: Consider the trinomial $x^2 + Bx + C = (x+p)(x+q)$ and fill in the spaces in this sentence.

   The middle term of the trinomial, **B**, is the _____ of p and q. The last term, or the constant term, C, is the _____ of p and q.

2:   When all terms in the trinomial are positive what must be the signs in the factors?

DO THESE PROBLEMS, page 375: 7-51 ODD

SEC 6.3 Factoring trinomials of the type $ax^2 + bx + c$

   1.   Review your in class notes and list the three methods to factor trinomial of the type $ax^2 + bx + c$

   2.   Which method do you prefer.

DO THESE PROBLEMS, page 385 5-29,odd; 41-49 odd; 51, 53,55,57

SEC 6.4 FACTORING PERFECT SQUARE TRINOMIALS And DIFFERENCE OF SQUARES

1: Perform this multiplication $(A+B)^2$

2: In a perfect square trinomial the two end terms must be perfect _____.

And the middle term must be (even or odd) _____.

3: Are expressions such as $A^2 - B^2$ always factorable?

4: Can you factor $A^2 + B^2$ and, if so, what are the factors?

DO THESE PROBLEMS, page 392 19-35,odd; 51, 53,55; 57-73 odd

6.5 FACTORING THE SUMS AND DIFFERENCES OF CUBES

1. Look at page 396 and write down the general factors for the sum and difference of two cubes.

DO THESE PROBLEMS, page 397 11, 15, 17, 21, 23, 27, 31, 33, 37

6.6 A GENERAL STRATEGY
Read page 398 and answer these questions
1.   What do we always do first when factoring a polynomial?

2.   How do we check our answer after factoring?

DO THESE PROBLEMS, page 402: 5-37,odd; 51-65 odd

6.7 SOLVING POLYNOMIAL EQUATIONS BY FACTORING
1: If the product of two numbers is zero, what can we say about at least one of the numbers?

2:   How many answers can there be for an equation such as $x^2 + bx + c = 0$

3: How many answers can there be for a cubic equation?

DO THESE PROBLEMS, page 409: 5-13,odd; 21-37 odd; 53 and 55

6.8 Applications
1. What is the pythagorean theorem?

DO THESE PROBLEMS, page 420: 4, 7, 9, 15, 16, 18, 28,31