

Spring Final Exam Review

Name _____ Class Period _____

- Know how to simplify radicals
 1. $9\sqrt{50w^2}$
 2. $\sqrt{9x^2y^3}$
 3. $\sqrt{84mh^4}$
 4. $-7\sqrt{54x^3}$
 5. $2\sqrt{25x^5}$
 6. $\sqrt{180a^{11}b^{14}c^{15}}$
- Know how to factor when $a = 1$
 1. $X^2 + x - 6$
 2. $X^2 + 9x + 20$
 3. $3x^2 + 12x + 12$
 4. $X^2 - 11x + 18$
 5. $X^2 + 4x - 21$
 6. $3x^2 - 15x + 18$
- Be sure how to name polynomials based on the **degree** and **number of terms**
 - Ex. Constant, Linear, Quadratic, Cubic, etc.
 - Ex. Monomial, Binomial, Trinomial, Polynomial
- Know standard form and it's components (a, b, c and coefficients/constant)
- Know how to multiply polynomials (Distribute, FOIL, or Box Method)
 1. $5x^2(3x^5 + 2x - 6)$
 2. $(3x - 6)(x + 4)$
 3. $(8x + 11)(2x - 9)$
 4. $(2x^2 + 3x - 4)(x^2 - 2x + 5)$
 5. $(x + 1)(x + 3)(x + 5)$
 6. $(x^2 - 6x + 2)(3x^2 + 7x - 4)$
- Know how to factor out a GCF
 1. $8xy + 4xy^2$
 2. $20ab^3c^4d - 5ab^2c^2$
 3. $12w^3t^2 - 9wt^2 + 15w^2t^3$
 4. $-x^2 + 8x$
 5. $14x^2y^2z + 21xy^2z^2$
 6. $36t^5 + 40t^4 - 160t^3 - 20t^2$
- Know how to factor when $a > 1$
 1. $2x^2 + x - 6$
 2. $4x^2 - 19x + 12$
 3. $5x^2 - 13x + 6$
 4. $4x^2 - 15x + 9$
 5. $6x^2 + x - 2$
 6. $12x^2 + 5x - 2$
- Know how to factor difference of squares
 1. $81x^2 - 49$
 2. $X^2 - y^2$
 3. $169y^2 - 100$
 4. $25x^6 - 144$
 5. $36y^8 - z^2$
 6. $16y^2 - 64z^{10}$