

Ma 092 ~ Power Functions PreTest Study Guide

For this test, you will have to demonstrate proficiency in the following skills:

- Identifying the degree of a polynomial
- Solving problems that require understanding the Order of Operations rule with integers and exponents (*review from 081*)
- Multiply monomials (Ex: a^2a^3)
- Changing numbers to Scientific Notation and back (*review from 084*) also multiplying and dividing numbers given in Scientific Notation.
- Add, subtract, multiply, square, and divide polynomials
- Be able to “fill in the blank” as to what makes a perfect square trinomial (Ex: $4x^2 + 12x + a \dots$ What would a have to be for the polynomial to be a perfect square trinomial?)
- Understand and apply the meaning of negative exponents and fractional exponents
- Estimate square roots (Ex: $\sqrt{21}$ is between what two whole numbers?)
- Simplify radical expressions (be sure there are no perfect square factors under the radical)
- Multiply and simplify radical expressions, both singular like $\sqrt{21x^3} \times \sqrt{15x}$ and “binomial” like $(4 + \sqrt{3})(7 - \sqrt{6})$
- Add or subtract radical expressions
- Simplify fractional radical expressions (Ex: $\frac{5\sqrt{6x^3}}{10\sqrt{12x^6}}$) Don't forget to rationalize the denominator!
- Solve an equation containing radical expressions (Ex: $\sqrt{x+4} - 2 = 1$)
- Applying any of the above to a real-world situation