

Stuff You Should Know

- Linear equations
- Solving Linear Systems
- Quadratic Relations

Exponent Laws

- $\times \div ()^{()}$
- Zero exponents
- Negative exponents
- Rational exponents
- Solving exponential equations using exponent laws

Algebraic Expressions

- $+ - \times \div$ rational expressions; radical expressions; complex expressions
- Factoring; reducing; simplifying rational expressions
- Restrictions of rational or radical expressions
- Reducing or simplifying radical expressions, $a\sqrt{b}$ (b has been reduced by the greatest perfect square)
- Rationalizing denominators with radicals or complex numbers
- Complex numbers expressed in rectangular form, $a+bi$

Quadratic Equations and Functions

- Converting forms of quadratic equations (standard form; vertex form; factored form)
- Solving quadratic equations for real or complex roots
- Graphing parabolas
- Min\Max problems
- Linear—quadratic systems (line & parabola; line & circle)
- Quadratic—quadratic systems (only using parabolas & circles)

Fun Stuff

- contest problems
- proofs
- derive formulas
- quadratic patterns
- continued fractions