

# Math 103 Test 2 Khan Academy Videos

## Systems of Equations

1. By Graphing: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-graphically/v/graphings-systems-of-equations>
2. By Substitution: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-with-substitution/v/solving-systems-by-substitution-3>
3. By Elimination: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-elimination/v/addition-elimination-method-2>
4. Number of Solutions: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-solutions/v/practice-thinking-about-number-of-solutions-to-systems>
5. Coin Problem: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-word-problems/v/substitution-method-3>
6. Three Equations, Three Unknowns: <https://www.khanacademy.org/math/algebra-home/alg-system-of-equations/alg-systems-with-three-variables/v/systems-of-three-variables-2>

## Exponent Rules

7. Exponent Rules: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-numbers-operations/cc-8th-exponent-properties/v/exponent-properties-involving-products>
8. Exponent Rules: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-numbers-operations/cc-8th-exponent-properties/v/products-and-exponents-raised-to-an-exponent-properties>
9. Exponent Rules: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-numbers-operations/cc-8th-exponent-properties/v/exponent-properties-involving-quotients>
10. Zero Power: <https://www.khanacademy.org/math/pre-algebra/pre-algebra-exponents-radicals/pre-algebra-exponents/v/raising-a-number-to-the-0th-and-1st-power>
11. Negative Exponents: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-numbers-operations/cc-8th-pos-neg-exponents/v/negative-exponents>
12. Application of Rules: <https://www.khanacademy.org/math/in-eighth-grade-math/exponents-powers-1/laws-exponents/v/exponent-properties-4>

## Polynomials

13. Terms and Coefficients: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/introduction-to-polynomials/v/terms-coefficients-and-exponents-in-a-polynomial>
14. End Behavior: <https://www.khanacademy.org/math/algebra2/polynomial-functions/polynomial-end-behavior/v/polynomial-end-behavior>
15. Addition and Subtraction: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/adding-and-subtracting-polynomials/v/adding-and-subtracting-polynomials-3>
16. Multiplication: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/multiplying-polynomials-by-binomials/v/more-multiplying-polynomials>
17. Squaring Binomials: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/special-products-of-polynomials/v/pattern-for-squaring-simple-binomials>

## Factoring

18. Greatest Common Factor: <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-polynomials-1-common-factors/v/factoring-and-the-distributive-property-3>
19. Difference of Squares: <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-polynomials-3-special-product-forms/v/factoring-difference-of-squares>
20. Sum or Difference of Cubes: <https://www.khanacademy.org/math/algebra2/polynomial-functions/advanced-polynomial-factorization-methods/v/difference-of-cubes-factoring>
21. Grouping: <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-polynomials-2-quadratic-forms/v/factoring-trinomials-by-grouping-1>
22. Trinomial with  $a = 1$ : <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-quadratics-1/v/factoring-quadratic-expressions>
23. Trinomial by Grouping: <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-polynomials-2-quadratic-forms/v/factoring-trinomials-by-grouping-6>
24. Trinomial with Two Variables: <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-polynomials-2-quadratic-forms/v/factoring-quadratics-with-two-variables-example>

## Solving Polynomials by Factoring and Applications

25. By Factoring: <https://www.khanacademy.org/math/algebra/quadratics/solving-quadratic-equations-by-factoring/v/solving-quadratics-by-dividing-and-factoring>
26. Area Problem: <https://www.khanacademy.org/math/algebra/quadratics/solving-quadratic-equations-by-factoring/v/example-4-solving-a-quadratic-equation-by-factoring>
27. Box Problem: <https://www.khanacademy.org/math/algebra/quadratics/solving-quadratic-equations-by-factoring/v/example-3-solving-a-quadratic-equation-by-factoring>

## Simplifying Rational Expressions

28. Simplifying by Factoring <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/simplify-rational-expressions/v/simplifying-rational-expressions-introduction>
29. Simplifying by Factoring: <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/simplify-rational-expressions/v/simplifying-rational-expressions-w-two-variables>
30. Multiplying: <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/multiplying-and-dividing-rational-expressions/v/multiplying-and-dividing-rational-expressions-2>
31. Dividing: <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/multiplying-and-dividing-rational-expressions/v/multiplying-and-dividing-rational-expressions-3>
32. Addition: <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/adding-and-subtracting-rational-expressions/v/algebraic-expression-adding-fractions>
33. Addition: <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/adding-and-subtracting-rational-expressions/v/adding-rational-expression-w-unlike-denominators>
34. Subtraction: <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/adding-and-subtracting-rational-expressions/v/adding-and-subtracting-rational-expressions-3>
35. Complex Fractions: <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-negative-numbers-multiply-and-divide/cc-7th-mult-div-fractions-2/v/making-sense-of-hairy-fractions>
36. Complex Fractions: <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/nested-fractions/v/algebraic-expressions-with-fraction-division>