

Links to *Instructional Movies* that Help Students Review
99 Key Math Concepts for College Readiness Testing

Part I: Algebra

Algebraic Expressions

#	Math Concept & Instructional COUNTDOWN movies	Sample Problem
1	Evaluating an Expression Substitution Principle: Part 1	<i>Find the value of: $x^2 + 5x + 2$ when $x = -2$</i>
2	Adding and Subtracting Monomials Matching Coefficients	<i>Find the value of $3x + 5x$ Find the value of $5x - 4x$</i>
3	Adding and Subtracting Polynomials Simplification 1 Simplification 2	$4a + 4b + 4a + 2b - b$
4	Multiplying Monomials Intro to Simplifying Fractions Simplifying Algebraic Fractions: Monomials Part 1 Simplifying Algebraic Fractions: Monomials Part 2	$4a \times 2a$
5	Multiplying Binomials—FOIL Factoring Trinomials: Part 1	$(x + 2)(x - 5)$
6	Multiplying Other Polynomials	$(x^2 + 2x + 3)(x - 5)$

Factoring Algebraic Expressions

7	Factoring Out a Common Divisor Intro to Simplifying Algebraic Fractions Simplifying Algebraic Fractions: Monomials Part 1 Simplifying Algebraic Fractions: Monomials Part 2	$4x^2 + 8x + 24$
8	Factoring the Difference of Squares Factoring: Difference of Two Squares	$a^2 - b^2$
9	Factoring the Square of a Binomial Factoring Trinomials: Part 2	$(a^2 + 2ab + b^2)$
10	Factoring Other Polynomials-- Foil in Reverse Factoring Trinomials: Part 1	$x^2 + 5x + 6$
11	Simplifying an Algebraic Fraction Intro to Simplifying Algebraic Fractions Simplifying Algebraic Fractions: Monomials Part 1 Simplifying Algebraic Fractions: Monomials Part 2 Simplifying Algebraic Fractions: Binomials Part 1 Simplifying Algebraic Fractions: Binomials Part 2 Simplifying Algebraic Fractions: Binomials Part 3 Simplifying Algebraic Fractions: Difference of Two Squares	$x^2 - x - 12 / x^2 - 9$

Solving Equation

1 2	Solving a Linear Equation Equation Basics Addition Property of Equality Using the Addition Property of Equality	$2x + 13 = -5x - 8$
1 3	Solving “In Terms of”	$3a - 10b = -5a + 6b$
1 4	Translating from English into Algebra Translating English to Algebra Countdown Challenge: The Language of Algebra	<i>Four less than twice the sum of x and 6.</i>

Intermediate Algebra

15	Solving a Quadratic Equation Solving Quadratic Equations: Factoring	Solve for x: $x^2 - 7x + 12$
16	Solving a System of Equations	$x + y + 3$ and $3x + 2y = 7$
17	Solving an Equation that Includes Absolute Value Signs Absolute Value Equations: Part 1 Absolute Value Equations: Part 2 Graphing Absolute Value Equations Solving Absolute Value Equations: Part 1 Solving Absolute Value Equations: Part 2 Solving Absolute Value Equations: Part 3	$ x - 12 = 4$
18	Solving an Inequality Algebraic Intro to Inequalities Solution set: $x < -2$ and $x \geq 1$ Solution set: $-3 \leq x < 3$ Solving: $x + 4 > 6$	$-3x - 1 > 4 + 2x$

19	<p>Graphing Inequalities</p> <p>Graphing Inequalities: Part 1</p> <p>Graphing Inequalities: Part 2</p> <p>Graphing Inequalities</p>	<i>Graph $x > 3$</i>
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Coordinate Geometry

20	<p>Finding the Distance Between Two Points</p> <p>Pythagorean GPS Problem</p> <p>Pythagorean Baseball Problem</p>	<i>Find the distance between $A(-1, -2)$ and $B(2, -2)$.</i>
21	<p>Using Two Points to Find the Slope</p> <p>Distance Formula: Part 1</p> <p>Distance Formula: Part 2</p>	<i>Find the slope of the line that contains the points $C(3, 3)$ and $D(1, -1)$.</i>
22	<p>Using an Equation to Find the Slope</p> <p>Using $y=mx+b$: Runner 1</p> <p>Using $y=mx+b$: Runner 2</p>	<i>What is the slope of $y = 2x$?</i>
23	<p>Using an Equation to Find an Intercept</p> <p>Intro to Y Intercept & Slope</p>	<i>Find the y-intercept of $y = 2x + 1$</i>
24	<p>Equation for a Circle</p> <p>Graphs: Matching Labels, Formulas & Pictures</p>	<i>Write an equation for a circle.</i>
25	<p>Equation for a Parabola</p> <p>Parabola Basics</p>	<i>Write an equation for a parabola.</i>
26	<p>Equation for an Ellipse</p>	<i>Write an equation for an ellipse.</i>