

# Developmental Math

## Supplemental Resources Guide

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*If you come across any external links that do not work, we would be grateful if you could report them to the DCC Math Lab by emailing us at [mathlab@danville.edu](mailto:mathlab@danville.edu).*

The logo for Danville Community College, consisting of the letters 'DCC' in a bold, blue, sans-serif font.

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Danville Community College

## Unit 0 (Operations with Whole Numbers)

Section	Topic	Resources	Description
0.1	Adding whole numbers (with "carrying')	<a href="https://youtu.be/mAvuom42NyY">https://youtu.be/mAvuom42NyY</a>	Video - How to add whole numbers
	also see	<a href="https://youtu.be/N3I6OiO5mKI">https://youtu.be/N3I6OiO5mKI</a>	Video - Example of adding whole numbers
0.2	Subtracting whole numbers (with "borrowing")	<a href="https://youtu.be/Y6M89-6106I">https://youtu.be/Y6M89-6106I</a>	Video - How to subtract whole numbers
0.3a	Multiplying by a single digit number	<a href="https://youtu.be/FJ5qLWP3Fqo">https://youtu.be/FJ5qLWP3Fqo</a>	Video - How to multiply by a one-digit number
0.3b	Multiplying by a two digit number	<a href="https://youtu.be/RVYwunbpMHA">https://youtu.be/RVYwunbpMHA</a>	Video - how to multiply by a two-digit (or more) number
0.4a	Long division-dividing by a single digit number	<a href="https://youtu.be/KGMf314LUc0">https://youtu.be/KGMf314LUc0</a>	Video - Basic Division (Single digit divisor)
0.4b	Long division-dividing by a two digit number	<a href="https://youtu.be/HdU_rf7eMTI">https://youtu.be/HdU_rf7eMTI</a>	Video - Basic Division (Two digit divisor)
0.5	Order of Operations	<a href="https://youtu.be/dAgfnK528RA">https://youtu.be/dAgfnK528RA</a>	Video - Order of Operations, Whole Numbers

## Unit 1 (Operations with Positive Fractions)

Section	Topic	Resources	Description
1.1	Exponents and Prime Numbers	<a href="https://youtu.be/ONvLtTwnUHs">https://youtu.be/ONvLtTwnUHs</a>	Video - Factoring numbers
	also see	<a href="https://youtu.be/OHONSnb94w">https://youtu.be/OHONSnb94w</a>	Video - Prime Factorization
	also see	<a href="https://youtu.be/-zUmvpkhvW8">https://youtu.be/-zUmvpkhvW8</a>	Video - Introduction to Exponents
	also see	<a href="http://wg.wonderopolis.org/uploads/users/1573/332/prime_and_composite_numbers.pdf">http://wg.wonderopolis.org/uploads/users/1573/332/prime_and_composite_numbers.pdf</a>	Chart showing Prime and Composite numbers between 1 & 100
1.2	Introduction to Fractions and Mixed Numbers	<a href="https://youtu.be/s_nOwDux2gM">https://youtu.be/s_nOwDux2gM</a>	Video - Mixed Numbers
	also see	<a href="https://images.app.goo.gl/85tierobVZYCBg98A">https://images.app.goo.gl/85tierobVZYCBg98A</a>	Chart showing how to convert Mixed Numbers to Improper Fractions
1.3	Ratios and Rates	<a href="https://youtu.be/RQ2nYUBVvql">https://youtu.be/RQ2nYUBVvql</a>	Video - Ratios and Rates
	also see	<a href="https://images.app.goo.gl/FzA2hDnpz39jKfJN7">https://images.app.goo.gl/FzA2hDnpz39jKfJN7</a>	Rules for Divisibility (this helps when reducing fractions)
1.4	Multiplication and Division with Fractions and Mixed Numbers	<a href="https://youtu.be/qmfXyR7Z6Lk">https://youtu.be/qmfXyR7Z6Lk</a>	Video - Simple multiplication of fractions
	also see	<a href="https://youtu.be/4lkq3DgvmJo">https://youtu.be/4lkq3DgvmJo</a>	Video - Simple division of fractions
	also see	<a href="https://youtu.be/AtBUQH8Tkqc">https://youtu.be/AtBUQH8Tkqc</a>	Video - Simplifying fractions
	also see	<a href="https://images.app.goo.gl/hvx279wwzbS3PsLEA">https://images.app.goo.gl/hvx279wwzbS3PsLEA</a>	Rules and example
	also see	<a href="https://images.app.goo.gl/2UEb8YPdosDhs99PA">https://images.app.goo.gl/2UEb8YPdosDhs99PA</a>	Rules and example
1.5	Least Common Multiple	<a href="https://youtu.be/pZEmFSP3Z0I">https://youtu.be/pZEmFSP3Z0I</a>	Video - Least Common Denominator (or Least Common Multiple)
	also see	<a href="https://images.app.goo.gl/9YRjVo5eHZE6MdVJ8">https://images.app.goo.gl/9YRjVo5eHZE6MdVJ8</a>	Finding the LCM (same as LCD) using Prime Factorization
1.6	Addition and Subtraction with Fractions	<a href="https://youtu.be/xNsyNwAkqfk">https://youtu.be/xNsyNwAkqfk</a>	Video - Addition & Subtraction of fractions (no regrouping)
	also see	<a href="https://images.app.goo.gl/tgqtkdVePTp1m3KX9">https://images.app.goo.gl/tgqtkdVePTp1m3KX9</a>	Rules for adding fractions
	also see	<a href="https://images.app.goo.gl/bvwYg957dpv2ewtq9">https://images.app.goo.gl/bvwYg957dpv2ewtq9</a>	Rules for subtracting fractions
1.7	Addition and Subtraction with Mixed Numbers	<a href="https://youtu.be/pynfj2bYRms">https://youtu.be/pynfj2bYRms</a>	Video - Addition of Mixed Numbers
	also see	<a href="https://youtu.be/RqUPSZLwHH0">https://youtu.be/RqUPSZLwHH0</a>	Video - Subtracting Mixed numbers
	also see	<a href="https://images.app.goo.gl/WekFisRF4mXDhy8w7">https://images.app.goo.gl/WekFisRF4mXDhy8w7</a>	Rules and example
1.8	Order of Operations with Fractions and Mixed	<a href="https://youtu.be/8ikRUI6PaJU">https://youtu.be/8ikRUI6PaJU</a>	Video - Order of Operations, Fractions

	Numbers			
		also see	<a href="https://youtu.be/ro6yRADn3Mw">https://youtu.be/ro6yRADn3Mw</a>	Video - Order of Operations, Fractions
		also see	<a href="https://images.app.goo.gl/5qqnxirNSby8gX43A">https://images.app.goo.gl/5qqnxirNSby8gX43A</a>	Chart with example showing PEMDAS

## Unit 2 (Operations with Positive Decimals and Percents)

Section	Topic	Resources	Description	
2.1	Introduction to Decimal Numbers	<a href="https://youtu.be/KG6ILNOiMgM">https://youtu.be/KG6ILNOiMgM</a>	Video - Introduction to decimal numbers and place value	
	also see	<a href="https://youtu.be/fd-E18EqSVk">https://youtu.be/fd-E18EqSVk</a>	Video - Rounding	
	also see	<a href="https://images.app.goo.gl/bnYjBncJHr9ZQnrP6">https://images.app.goo.gl/bnYjBncJHr9ZQnrP6</a>	Chart showing Place Value	
2.2	Addition and Subtraction with Decimal Numbers	<a href="https://images.app.goo.gl/6ETAdG4VvXj4wBXZ6">https://images.app.goo.gl/6ETAdG4VvXj4wBXZ6</a>	Examples of writing Decimals in Words	
		<a href="https://youtu.be/kwh4SD1ToFc">https://youtu.be/kwh4SD1ToFc</a>	Video - Addition and Subtraction with decimals	
		also see	<a href="https://images.app.goo.gl/rFE4Veg7isqCRXXQ6">https://images.app.goo.gl/rFE4Veg7isqCRXXQ6</a>	Rules and Example of Adding Decimals
2.3	Multiplication with Decimal Numbers	also see	<a href="https://images.app.goo.gl/uNoVxpLNRsHfEsKs8">https://images.app.goo.gl/uNoVxpLNRsHfEsKs8</a>	Rules and Example of Subtracting Decimals
		<a href="https://youtu.be/kwh4SD1ToFc?t=225">https://youtu.be/kwh4SD1ToFc?t=225</a>	Video - Multiplication with decimals	
		also see	<a href="https://images.app.goo.gl/ym8UUFc9TEUSRemT9">https://images.app.goo.gl/ym8UUFc9TEUSRemT9</a>	Rules and Example of Multiplying Decimals
2.4	Division with Decimal Numbers	<a href="https://youtu.be/kwh4SD1ToFc?t=475">https://youtu.be/kwh4SD1ToFc?t=475</a>	Video - Division with decimals	
		also see	<a href="https://images.app.goo.gl/meYWA WpLNKTe6mts6">https://images.app.goo.gl/meYWA WpLNKTe6mts6</a>	Rules and Example of Dividing Decimals
2.5	Decimal Numbers and Fractions	<a href="https://youtu.be/do_lbHld2Os">https://youtu.be/do_lbHld2Os</a>	Video - Decimals and Fractions	
		also see	<a href="https://images.app.goo.gl/76Ju14c po9x8H6YT6">https://images.app.goo.gl/76Ju14c po9x8H6YT6</a>	Rules and examples of converting
2.6	Decimal Numbers and Percents	<a href="https://youtu.be/JeVSmq1Nrpw?t=285">https://youtu.be/JeVSmq1Nrpw?t=285</a>	Video - Decimals and Percents	
		also see	<a href="https://images.app.goo.gl/VhWdD FwtaLSqEHVf6">https://images.app.goo.gl/VhWdD FwtaLSqEHVf6</a>	Common fraction/decimal/percent equivalents
2.7	Fractions and Percents	<a href="https://youtu.be/JeVSmq1Nrpw">https://youtu.be/JeVSmq1Nrpw</a>	Video - Fractions and Percents	
		also see	<a href="https://images.app.goo.gl/6Zife6u A8RfPuo2V9">https://images.app.goo.gl/6Zife6u A8RfPuo2V9</a>	Rules for changing any fraction to a percent
2.8	Solving Proportions	<a href="https://youtu.be/USmit5zUGas">https://youtu.be/USmit5zUGas</a>	Video - Proportions	
		also see	<a href="https://images.app.goo.gl/wnJMbq jAwLPjmsok7">https://images.app.goo.gl/wnJMbq jAwLPjmsok7</a>	Illustration showing how to solve by using cross products
2.9	U. S. Measurements	<a href="https://youtu.be/OvWMWCMfBNk">https://youtu.be/OvWMWCMfBNk</a>	Video - How to convert U.S. Measures to equivalent U.S. Measures	

		also see	<a href="https://images.app.goo.gl/1JVcHERjbRFvMHd7A">https://images.app.goo.gl/1JVcHERjbRFvMHd7A</a>	Chart showing customary U.S. Measurements
2.10	The Metric System		<a href="https://youtu.be/jeEUV7Xfzac">https://youtu.be/jeEUV7Xfzac</a>	Video - How to convert Metric Measures to equivalent U.S. Measures
		also see	<a href="https://images.app.goo.gl/bzcF1VPLKrwdNwWd7">https://images.app.goo.gl/bzcF1VPLKrwdNwWd7</a>	Chart showing Metric units of measure
2.11	U. S. to Metric Conversions		<a href="https://youtu.be/8SHTjGkbDp0">https://youtu.be/8SHTjGkbDp0</a>	Video - How to convert Metric Measures to equivalent Metric Measures
		also see	<a href="https://images.app.goo.gl/ZuRAMxvSwhJJ841E7">https://images.app.goo.gl/ZuRAMxvSwhJJ841E7</a>	Chart showing US/Metric conversions
		also see	<a href="https://images.app.goo.gl/pmVegnHUhWZnrRBd6">https://images.app.goo.gl/pmVegnHUhWZnrRBd6</a>	Chart showing US/Metric conversions
2.12	Reading Graphs		<a href="https://youtu.be/ypp-ex99Sso">https://youtu.be/ypp-ex99Sso</a>	Video - Working with Histograms
		also see	<a href="https://images.app.goo.gl/LwaqqUyuS8cbnvGS9">https://images.app.goo.gl/LwaqqUyuS8cbnvGS9</a>	Illustration of different types of charts and graphs

## Unit 3 (Algebra basics)

Section	Topic	Resources	Description
3.1a	The Real Number Line and Inequalities	<a href="https://youtu.be/8g6uJmFoFOw">https://youtu.be/8g6uJmFoFOw</a>	Video - Introduction to Inequalities, Symbols, and the Number Line
	also see	<a href="https://images.app.goo.gl/4ZZSBos32SQevYV2A">https://images.app.goo.gl/4ZZSBos32SQevYV2A</a>	Illustration of Real Number line
	also see	<a href="https://images.app.goo.gl/rXi1JWp5mj5vWD4e9">https://images.app.goo.gl/rXi1JWp5mj5vWD4e9</a>	Illustration showing different types of Real Numbers
3.1b	Introduction to Absolute Value	<a href="https://youtu.be/BrYy1bgh3Y0">https://youtu.be/BrYy1bgh3Y0</a>	Video - Absolute Value (Basic)
	also see	<a href="https://images.app.goo.gl/nv5hxxUy7qd7DxHt5">https://images.app.goo.gl/nv5hxxUy7qd7DxHt5</a>	Illustration showing meaning of Absolute Value
3.2	Introduction to Exponents	<a href="https://youtu.be/-zUmvpkhvW8">https://youtu.be/-zUmvpkhvW8</a>	Video - Introduction to Exponents
	also see	<a href="https://images.app.goo.gl/fFkd46JMCCyxyZqJA">https://images.app.goo.gl/fFkd46JMCCyxyZqJA</a>	Illustration showing meaning of Exponent
3.3	Square Roots	<a href="https://youtu.be/B4zejSl8zho">https://youtu.be/B4zejSl8zho</a>	Video - Introduction to Roots
	also see	<a href="https://images.app.goo.gl/Gqh23QPNUT5Fatoi9">https://images.app.goo.gl/Gqh23QPNUT5Fatoi9</a>	Illustration showing meaning of Square Root
3.4	Addition with Real Numbers	<a href="https://youtu.be/jVvUiExjes">https://youtu.be/jVvUiExjes</a>	Video - Addition and Subtraction with Integers
	also see	<a href="https://images.app.goo.gl/Wfij6glazqsfDSCs8">https://images.app.goo.gl/Wfij6glazqsfDSCs8</a>	Rules for adding positive and negative numbers
3.5	Subtraction with Real Numbers	<a href="https://youtu.be/Ekl7g9x7xuw">https://youtu.be/Ekl7g9x7xuw</a>	Video - Subtraction with Integers
	also see	<a href="https://images.app.goo.gl/vL4oEZYaJSShCj1A9">https://images.app.goo.gl/vL4oEZYaJSShCj1A9</a>	Rules for subtracting positive and negative numbers
3.6	Multiplication and Division with Real Numbers	<a href="https://youtu.be/K_tPbVPfHgk">https://youtu.be/K_tPbVPfHgk</a>	Video - Multiplication and Division with Integers
	also see	<a href="https://images.app.goo.gl/J2ZS8QKMGSGpokj88">https://images.app.goo.gl/J2ZS8QKMGSGpokj88</a>	Rules for multiplying and dividing positive and negative numbers
3.7	Order of Operations with Real Numbers	<a href="https://youtu.be/dAgfnK528RA">https://youtu.be/dAgfnK528RA</a>	Video - Order of Operations, Whole Numbers
	also see	<a href="https://images.app.goo.gl/Riqat2szE7rdBGzG7">https://images.app.goo.gl/Riqat2szE7rdBGzG7</a>	Chart showing PEMDAS
3.8	Introduction to Scientific Notation	<a href="https://youtu.be/bXkewQ7WEdl">https://youtu.be/bXkewQ7WEdl</a>	Video - Introduction to Scientific Notation
	also see	<a href="https://images.app.goo.gl/7yNcB7qUHK2oXLPg9">https://images.app.goo.gl/7yNcB7qUHK2oXLPg9</a>	Illustration of using Scientific Notation
3.9	Properties of Real Numbers	<a href="https://youtu.be/v-6MShC82ow">https://youtu.be/v-6MShC82ow</a>	Video - The Distributive Property
	also see	<a href="https://images.app.goo.gl/cjyJXKEHbzEkWqKy8">https://images.app.goo.gl/cjyJXKEHbzEkWqKy8</a>	Chart showing the Properties of Real Numbers
3.10	Simplifying and Evaluating Algebraic Expressions	<a href="https://youtu.be/ffLLmV4mZwU">https://youtu.be/ffLLmV4mZwU</a>	Video - Introduction to Polynomials and Terms

		also see	<a href="https://youtu.be/DKC74YKjPY">https://youtu.be/DKC74YKjPY</a>	Video - Combining Like Terms in Polynomials
		also see	<a href="https://youtu.be/dsqslQv9lik">https://youtu.be/dsqslQv9lik</a>	Video - Substituting numbers for letters in an Algebraic Expression
		also see	<a href="https://images.app.goo.gl/oyDKVk8qeMktAVLb6">https://images.app.goo.gl/oyDKVk8qeMktAVLb6</a>	Illustration showing how to combine like terms
3.11a	Solving Linear Equations: $x + b = c$		<a href="https://youtu.be/l3XzepN03KQ">https://youtu.be/l3XzepN03KQ</a>	Video - Solving Basic Equations, Adding and Subtracting
		also see	<a href="https://images.app.goo.gl/78NU95UUpLD3KHee7">https://images.app.goo.gl/78NU95UUpLD3KHee7</a>	Illustration showing simple addition/subtraction equation
3.11b	Solving linear Equations: $ax = c$		<a href="https://youtu.be/Qyd_v3DGzTM">https://youtu.be/Qyd_v3DGzTM</a>	Video - Solving Basic Equations, Multiplying and Dividing
		also see	<a href="https://images.app.goo.gl/4cnXvxu4kYpSbVz2A">https://images.app.goo.gl/4cnXvxu4kYpSbVz2A</a>	Illustration showing simple multiplication equation
3.12	Solving Percent Problems Using the Equation $R \cdot B = A$		<a href="https://youtu.be/ao89Kz-6Ed8">https://youtu.be/ao89Kz-6Ed8</a>	Video - Using the Is/Of Method to solve Percent Problems
		also see	<a href="https://images.app.goo.gl/kPHGEEi4wBCb9msg7">https://images.app.goo.gl/kPHGEEi4wBCb9msg7</a>	Illustration showing determination of rate, base, and amount
		also see	<a href="https://images.app.goo.gl/NEPnrrAuW4E7BqnVA">https://images.app.goo.gl/NEPnrrAuW4E7BqnVA</a>	Illustration showing proportion method ( $\text{is/of} = \text{p}/100$ )
3.13	Applications: Discounts, Sales Tax, Commission, etc.		<a href="https://youtu.be/wL9XCoddK1s">https://youtu.be/wL9XCoddK1s</a>	video - Solving for Total Price, Sales Tax, and Original Price
		also see	<a href="https://images.app.goo.gl/K1EhfoxzHCekW1Ne7">https://images.app.goo.gl/K1EhfoxzHCekW1Ne7</a>	Examples of sales tax, discount, etc.
3.14	Applications: Simple Interest		<a href="https://youtu.be/f6Hed9JR8u4">https://youtu.be/f6Hed9JR8u4</a>	Video - Finding Simple interest
		also see	<a href="https://images.app.goo.gl/6C9vN3CB3SQ7hBeT7">https://images.app.goo.gl/6C9vN3CB3SQ7hBeT7</a>	Illustration of Simple Interest formula
3.15	Perimeter		<a href="https://youtu.be/AAY1bsazcgM">https://youtu.be/AAY1bsazcgM</a>	Video - Finding the Perimeter of a Polygon
		also see	<a href="https://images.app.goo.gl/Zss26HvYRAytw6857">https://images.app.goo.gl/Zss26HvYRAytw6857</a>	Illustration showing Perimeter Formulas of common polygons
3.16	Area		<a href="https://youtu.be/xCdxURXMdFY">https://youtu.be/xCdxURXMdFY</a>	Video - Finding the Area of a Polygon
		also see	<a href="https://images.app.goo.gl/4s6SCexTSGymhchY8">https://images.app.goo.gl/4s6SCexTSGymhchY8</a>	Illustration showing Area Formulas of common polygons
3.17	Circles		<a href="https://youtu.be/cCOfZ_lkFpQ">https://youtu.be/cCOfZ_lkFpQ</a>	Video - Circles and Pi
			<a href="https://images.app.goo.gl/qCjJovKNjrzVRDdVA">https://images.app.goo.gl/qCjJovKNjrzVRDdVA</a>	Illustration showing Formulas for Circles
		also see	<a href="https://youtu.be/O-cawByg2aA">https://youtu.be/O-cawByg2aA</a>	Video - Finding the Circumference and Area of a Circle
3.18	Volume		<a href="https://youtu.be/qJwecTgce6c">https://youtu.be/qJwecTgce6c</a>	Video - Calculating Volume
		also see	<a href="https://images.app.goo.gl/WUHbyR5PGxxmajcu9">https://images.app.goo.gl/WUHbyR5PGxxmajcu9</a>	Illustration showing Volume Formulas of common shapes



## Unit 4 (First Degree Equations and Inequalities in One Variable)

Section	Topic	Resources	Description
4.1a	Solving Linear Equations: $x + b = c$	<a href="https://youtu.be/l3XzepN03KQ">https://youtu.be/l3XzepN03KQ</a>	Video - Solving Basic Equations, Adding and Subtracting
	also see	<a href="https://images.app.goo.gl/78NU95UUpLD3KHee7">https://images.app.goo.gl/78NU95UUpLD3KHee7</a>	Illustration showing simple addition/subtraction equation
4.1b	Solving linear Equations: $ax = c$	<a href="https://youtu.be/Qyd_v3DGzTM">https://youtu.be/Qyd_v3DGzTM</a>	Video - Solving Basic Equations, Multiplying and Dividing
	also see	<a href="https://images.app.goo.gl/4cnXvxu4kYpSbVz2A">https://images.app.goo.gl/4cnXvxu4kYpSbVz2A</a>	Illustration showing simple multiplication equation
	also see example of $x/a = c$	<a href="https://images.app.goo.gl/vXy7Cc1ZaVF7mQag8">https://images.app.goo.gl/vXy7Cc1ZaVF7mQag8</a>	Illustration showing simple division equation
4.2	Solving linear Equations: $ax + b = c$	<a href="https://youtu.be/LDiiYKYvvdA">https://youtu.be/LDiiYKYvvdA</a>	Video - Solving Two-step Equations
	also see	<a href="https://images.app.goo.gl/ZKSPeQewhqJEKYM68">https://images.app.goo.gl/ZKSPeQewhqJEKYM68</a>	Illustration showing names of parts of an equation
	also see example of $a(x+b)=c$	<a href="https://images.app.goo.gl/fcB2tqiUinxCpMyL9">https://images.app.goo.gl/fcB2tqiUinxCpMyL9</a>	Illustration of equation using order of operations
4.3	Solving linear Equations: $ax + b = cx + d$	<a href="https://youtu.be/qLJKZ0tPYTc">https://youtu.be/qLJKZ0tPYTc</a>	Video - Solving equations with a variable on both sides of the equals sign
	also see	<a href="https://images.app.goo.gl/GMmSvE3EVMH4RukJ6">https://images.app.goo.gl/GMmSvE3EVMH4RukJ6</a>	Illustration showing combination of like terms
4.4	Working with Formulas	<a href="https://youtu.be/sBgjEBs6VoY">https://youtu.be/sBgjEBs6VoY</a>	Video - Solving for a Variable in a Formula
4.5	Translating English Phrases and Algebraic Expressions	<a href="https://youtu.be/KmuWR_LriQU">https://youtu.be/KmuWR_LriQU</a>	Video - How to Set Up Word Problems
	also see	<a href="https://images.app.goo.gl/UJQddqsnWuqJKN7w7">https://images.app.goo.gl/UJQddqsnWuqJKN7w7</a>	Illustration of key words in word problems
4.6	Applications: Number Problems and Consecutive Integers	<a href="https://youtu.be/0k9Exo8fLXQ">https://youtu.be/0k9Exo8fLXQ</a>	Video - How to Solve Consecutive Integer Problems
4.7	Applications: Distance-Rate-Time	<a href="https://youtu.be/OywQoXFBJPE">https://youtu.be/OywQoXFBJPE</a>	Video - How to solve Distance-Time-Rate Problems
	also see	<a href="https://images.app.goo.gl/FNhoWrxySvSyYtrq9">https://images.app.goo.gl/FNhoWrxySvSyYtrq9</a>	Illustration of $d=rt$ formula
4.7	Applications: Interest	<a href="https://youtu.be/3IAE74J09mY">https://youtu.be/3IAE74J09mY</a>	Video - How to find Amounts invested, given interest rates/amount
	also see	<a href="https://images.app.goo.gl/7iyWMaM5NpPNRzz29">https://images.app.goo.gl/7iyWMaM5NpPNRzz29</a>	Illustration of Simple Interest formula
4.7	Applications: Average	<a href="https://youtu.be/eEY3U3x_THc">https://youtu.be/eEY3U3x_THc</a>	Video - finding Missing number when Average is known
	also see	<a href="https://images.app.goo.gl/HBeduZHW46SKrAc7A">https://images.app.goo.gl/HBeduZHW46SKrAc7A</a>	Illustration of Formula for finding the Average

4.8	Solving Absolute Value Equations	<a href="https://youtu.be/nrw0jXulqFw">https://youtu.be/nrw0jXulqFw</a>	Video - How to solve Absolute Value problems
	also see	<a href="https://images.app.goo.gl/oU2DMcuVY5TB5iAw5">https://images.app.goo.gl/oU2DMcuVY5TB5iAw5</a>	Example of simple Absolute Value problem
	also see	<a href="https://images.app.goo.gl/9Y65jPEC6JLXzc6a9">https://images.app.goo.gl/9Y65jPEC6JLXzc6a9</a>	Example of a more complex Absolute Value problem
4.9	Linear Inequalities	<a href="https://youtu.be/8hhewFQ_K0w">https://youtu.be/8hhewFQ_K0w</a>	Video - Introduction to Inequalities
	also see	<a href="https://images.app.goo.gl/CWEFZCn6MG15jo4E8">https://images.app.goo.gl/CWEFZCn6MG15jo4E8</a>	Illustration of Linear Inequality on a Number Line

## Unit 5 (Linear Equations, Inequalities and Systems of Linear Equations in Two Variables)

Section	Topic	Resources	Description
5.1	The Cartesian Coordinate System	<a href="https://youtu.be/9Uc62CuQjC4">https://youtu.be/9Uc62CuQjC4</a>	Video - Plotting points and graphing
	also see	<a href="https://youtu.be/DXr_xU5g-GU">https://youtu.be/DXr_xU5g-GU</a>	Video - Find two points to graph a line
	also see	<a href="https://youtu.be/RX9p7Oezplw">https://youtu.be/RX9p7Oezplw</a>	Video - Find two points to graph a line
	also see	<a href="https://youtu.be/NJuXGxYvac8">https://youtu.be/NJuXGxYvac8</a>	Video - Graphing a Vertical Line
		<a href="https://images.app.goo.gl/uVnRNzQFNxRnsvRf8">https://images.app.goo.gl/uVnRNzQFNxRnsvRf8</a>	Illustration of the Cartesian Coordinate System
5.2	Finding X and Y Interecepts	<a href="https://youtu.be/mSZGEvV8WWI">https://youtu.be/mSZGEvV8WWI</a>	Video - How to find X and Y Intercepts
	also see	<a href="https://youtu.be/KdsphE7E3I0">https://youtu.be/KdsphE7E3I0</a>	Video - How to find X and Y Intercepts
	also see	<a href="https://images.app.goo.gl/GVCq5aj5gnbKGkvo8">https://images.app.goo.gl/GVCq5aj5gnbKGkvo8</a>	Illustration of x and y intercepts
5.3a	Slope	<a href="https://youtu.be/XSUmsIIYudo">https://youtu.be/XSUmsIIYudo</a>	Video - How to find Slope when given two points
	also see	<a href="https://images.app.goo.gl/RqdQR7joNePWVpDX8">https://images.app.goo.gl/RqdQR7joNePWVpDX8</a>	Illustration of how to find slope of a line
5.3b	Slope-Intercept Form	<a href="https://youtu.be/MXV65i9g1Xg">https://youtu.be/MXV65i9g1Xg</a>	Video - Introduction to Slope and Slope-Intercept Form
	also see	<a href="https://youtu.be/hzHz72H2vK8">https://youtu.be/hzHz72H2vK8</a>	Video - Find an Equation when given the slope and y-intercept
	also see	<a href="https://images.app.goo.gl/gnug3MJUJW3wtb3K9">https://images.app.goo.gl/gnug3MJUJW3wtb3K9</a>	Illustration of Equation in Slope-Intercept Form
5.4a	Point-Slope Form	<a href="https://youtu.be/zpl4RUaH1hw">https://youtu.be/zpl4RUaH1hw</a>	Video - Alternate way to find Equation, given point and slope
	also see	<a href="https://youtu.be/ECui8cbuunw">https://youtu.be/ECui8cbuunw</a>	Video - Alternate way to find Equation, given two points
	also see	<a href="https://images.app.goo.gl/so6eThf mAGnd1UDv7">https://images.app.goo.gl/so6eThf mAGnd1UDv7</a>	Illustration of how to set up Point-Slope Form
5.4b	Parallel and Perpendicular Lines	<a href="https://youtu.be/DKkZzzRjIOg">https://youtu.be/DKkZzzRjIOg</a>	Video - Determine if slopes are parallel, perpendicular, or neither
	also see	<a href="https://youtu.be/gq9hixUER9M">https://youtu.be/gq9hixUER9M</a>	Video - Finding equations of lines that are parallel or perpendicular
	also see	<a href="https://images.app.goo.gl/z6a6ShJyAdPaEnGC8">https://images.app.goo.gl/z6a6ShJyAdPaEnGC8</a>	Illustration showing slopes of Parallel and Perpendicular Lines
5.5	Graphing Linear Inequalities	<a href="https://youtu.be/XoVo8degv_s">https://youtu.be/XoVo8degv_s</a>	Video - How to graph Inequalities
5.6	Introduction to Functions and Function Notation	<a href="https://youtu.be/_e0EdFGpcvc">https://youtu.be/_e0EdFGpcvc</a>	Video - How to solve function notation problems
	also see	<a href="https://youtu.be/52tpYl2tTqk">https://youtu.be/52tpYl2tTqk</a>	Video - Introduction to Functions
5.7	Systems of Linear Equations: Solution by Graphing	<a href="https://youtu.be/UgsvlmmVUoo">https://youtu.be/UgsvlmmVUoo</a>	Video - How to solve a system of equations by graphing
5.8	Systems of Linear Equations: Solution by	<a href="https://youtu.be/YriMMWbndn0">https://youtu.be/YriMMWbndn0</a>	Video - How to solve a system of equations, Substitution

	Substitution		Method
5.9	Systems of Linear Equations: Solution by Addition	<a href="https://youtu.be/XOJgzW4P7T8">https://youtu.be/XOJgzW4P7T8</a>	Video - How to solve a system of equations, Addition Method
5.10a	Applications: Distance-Rate-Time	<a href="https://youtu.be/OYX_0fpMnpQ">https://youtu.be/OYX_0fpMnpQ</a>	Video - How to solve Distance-Rate-Time problems
	also see	<a href="https://youtu.be/JdIALgiv3aE">https://youtu.be/JdIALgiv3aE</a>	Video - How to solve Distance-Rate-Time problems; 2 more examples
5.10b	Applications: Number Problems	<a href="https://youtu.be/VjPX-XIN7Ok">https://youtu.be/VjPX-XIN7Ok</a>	Video - How to solve Word Problems
5.10c	Applications: Amounts and Costs	<a href="https://youtu.be/liW_ALj4Qj8?t=343">https://youtu.be/liW_ALj4Qj8?t=343</a>	Video - Comparing Cost per Unit
5.11	Applications: Interest and Mixture	<a href="https://youtu.be/2fw6OZ1EZnQ">https://youtu.be/2fw6OZ1EZnQ</a>	Video - Solving Percent and Mixture problems

## Unit 6 (Exponents, Factoring and Polynomial Equations)

Section	Topic	Resources	Description
6.1a	Exponents	<a href="https://youtu.be/g5ZGDNxJwxA">https://youtu.be/g5ZGDNxJwxA</a>	Video - Laws of Exponents
6.1b	Negative Exponents	<a href="https://youtu.be/wSracfsnFI8">https://youtu.be/wSracfsnFI8</a>	Video - Introduction to Negative Exponents
6.2a	Power Rules for Exponents	<a href="https://youtu.be/A1wKTIbTsfk?t=152">https://youtu.be/A1wKTIbTsfk?t=152</a>	Video - Laws of Exponents
	also see	<a href="https://youtu.be/Pu2dqa1GgYU?t=24">https://youtu.be/Pu2dqa1GgYU?t=24</a>	Rap Video - Power Rules of Exponents
6.2b	Scientific Notation - addition and subtraction	<a href="https://youtu.be/p0zVNTko7z4">https://youtu.be/p0zVNTko7z4</a>	Video - Addition and Subtraction using Scientific notation
	Scientific Notation - multiplication and division	<a href="https://youtu.be/UADVIDjdaVg">https://youtu.be/UADVIDjdaVg</a>	Video - Multiplication and Division using Scientific notation
6.3	Introduction to Polynomials	<a href="https://youtu.be/ffLLmV4mZwU">https://youtu.be/ffLLmV4mZwU</a>	Video - Introduction to Polynomials
6.4	Addition and Subtraction with Polynomials	<a href="https://youtu.be/DKC74YKJpNY">https://youtu.be/DKC74YKJpNY</a>	Video - Simplifying Polynomials
6.5	Multiplication with Polynomials	<a href="https://youtu.be/XYP8oPVdrZw">https://youtu.be/XYP8oPVdrZw</a>	Video - Multiplying Polynomials
6.6a	The FOIL Method	<a href="https://youtu.be/dX5EnXOdI2w">https://youtu.be/dX5EnXOdI2w</a>	Video - Foil Method explained
6.6b	Special Products of Binomials	<a href="https://youtu.be/rMF_SX0SgB8">https://youtu.be/rMF_SX0SgB8</a>	Video - Difference of Two Perfect Squares
6.7	Division by a Monomial	<a href="https://youtu.be/L09nAQnnGJQ">https://youtu.be/L09nAQnnGJQ</a>	Video - Dividing a Polynomial by a Monomial
6.8a	Greatest common Factor of Two or More Terms	<a href="https://youtu.be/-VKAYqzRp4o?t=103">https://youtu.be/-VKAYqzRp4o?t=103</a>	Video - Introduction to Greatest Common Factor (Algebraic Expressions)
6.8b	Greatest common Factor of a Polynomial	<a href="https://youtu.be/-GPhHv7gxI4">https://youtu.be/-GPhHv7gxI4</a>	Video - Introduction to Factoring Polynomials using the GCF
6.8c	Factoring Expressions by Grouping	<a href="https://youtu.be/kna95eSeb5A">https://youtu.be/kna95eSeb5A</a>	Video - Factoring by Grouping
6.9	Factoring Trinomials with a Leading Coefficient of 1	<a href="https://youtu.be/2iYlgo4I3Qw">https://youtu.be/2iYlgo4I3Qw</a>	Video - Introduction to Factoring Trinomials
6.10a	Factoring Trinomials by Trial and Error	<a href="https://youtu.be/YtN9_tCaRQc">https://youtu.be/YtN9_tCaRQc</a>	Video - Factoring Trinomials, Trial and Error (and "Magic X" Method)
6.10b	Factoring Trinomials by the A-C Method	<a href="https://youtu.be/M1oIJRu92CM">https://youtu.be/M1oIJRu92CM</a>	Video - Factoring Trinomials using the A-C Method
6.11a	Special Factorizations - Squares	<a href="https://youtu.be/GznFQpsgVvk">https://youtu.be/GznFQpsgVvk</a>	Video - Factoring Perfect Squares and Difference of Squares
6.11b	Special Factorizations - Cubes	<a href="https://youtu.be/5wISczFXops">https://youtu.be/5wISczFXops</a>	Video - Factoring Sum of Cubes and Difference of Cubes - SOAP Method
6.12	Additional Factoring Practice	<a href="https://youtu.be/9MUdAr1PnIE">https://youtu.be/9MUdAr1PnIE</a>	Video - Review of Factoring Trinomials
6.13	Solving a Quadratic Equation by Factoring	<a href="https://youtu.be/Z5MnP9da4EM">https://youtu.be/Z5MnP9da4EM</a>	Video - How to solve a Quadratic Equation by Factoring
6.14	Applications of Quadratic Equations	<a href="https://youtu.be/LMApqDGjOr4">https://youtu.be/LMApqDGjOr4</a>	Video - How to solve Consecutive Integers and Area of Rectangle

## Unit 7 (Rational Expressions and Equations)

Section	Topic	Resources	Description
7.1a	Introduction to Rational Expressions	<a href="https://youtu.be/i7w_aRIVagU">https://youtu.be/i7w_aRIVagU</a>	Video - Simplifying Rational Expressions
7.1b	Multiplication and Division with Rational Expressions	<a href="https://youtu.be/SpCGa-nbhos">https://youtu.be/SpCGa-nbhos</a>	Video - Multiplying Rational Expressions
	also see	<a href="https://youtu.be/2kmjENwKscQ">https://youtu.be/2kmjENwKscQ</a>	Video - Dividing Rational Expressions
7.2	Addition and Subtraction with Rational Expressions	<a href="https://youtu.be/pADVEckx4uQ">https://youtu.be/pADVEckx4uQ</a>	Video - Adding Rational Expressions
	also see	<a href="https://youtu.be/Wdlc8PHn4rk">https://youtu.be/Wdlc8PHn4rk</a>	Video - Subtracting Rational Expressions
	also see	<a href="https://youtu.be/BHEEoiqGC1Y">https://youtu.be/BHEEoiqGC1Y</a>	Video - Solving Equations with Rational Expressions
7.3	Complex Fractions	<a href="https://youtu.be/SZQfuZVhhfk">https://youtu.be/SZQfuZVhhfk</a>	Video - Simplifying Complex Fractions and Expressions
7.4a	Division by a Monomial	<a href="https://youtu.be/TI0oCD6OXbl">https://youtu.be/TI0oCD6OXbl</a>	Video - Dividing a Polynomial by a Monomial
7.4b	The Division Algorithm	<a href="https://youtu.be/AdTRwnyf52c?t=227">https://youtu.be/AdTRwnyf52c?t=227</a>	Video - Dividing a Polynomial by a Binomial
7.5	Solving Equations with Rational Expressions	<a href="https://youtu.be/wCuWHiB138A">https://youtu.be/wCuWHiB138A</a>	Video - Solving Equations with Rational Expressions
7.6	Applications: Rational Expressions	<a href="https://youtu.be/X8dxgr-clu8">https://youtu.be/X8dxgr-clu8</a>	Video - Work Word Problems
	also see	<a href="https://youtu.be/N7uLkYd857M">https://youtu.be/N7uLkYd857M</a>	Video - Distance/Rate/Time Word Problems
	also see	<a href="https://youtu.be/tGP4oDPN3-o">https://youtu.be/tGP4oDPN3-o</a>	Video - Word Problems involving Proportions

## Unit 8 (Rational Exponents and Radicals)

Section	Topic	Resources	Description
8.1	Evaluating Radicals	<a href="https://youtu.be/ypi0Z431eU">https://youtu.be/ypi0Z431eU</a>	Video - Basics of Evaluating Radicals
8.2	Rational Exponents	<a href="https://youtu.be/S7IY4e9G-yk">https://youtu.be/S7IY4e9G-yk</a>	Video - Simplifying Rational Exponents
8.3	Simplifying Radicals	<a href="https://youtu.be/2mejAHKMBiM">https://youtu.be/2mejAHKMBiM</a>	Video - How to Simplify Radicals
8.4a	Addition and Subtraction with Radicals	<a href="https://youtu.be/yH3kcWuoZak">https://youtu.be/yH3kcWuoZak</a>	Video - Adding and Subtracting Radicals (Basic)
	also see	<a href="https://youtu.be/qkve0IX77kw?t=307">https://youtu.be/qkve0IX77kw?t=307</a>	Video - Subtracting or Adding Radicals (Advanced)
8.4b	Multiplication with Radicals	<a href="https://youtu.be/NQE-scWKDlw">https://youtu.be/NQE-scWKDlw</a>	Video - Multiplying Radicals
8.5	Rationalizing Denominators	<a href="https://youtu.be/LfsJxeye1CA">https://youtu.be/LfsJxeye1CA</a>	Video - Dividing Radicals (Rationalizing the Denominator)
8.6	Equations with Radicals	<a href="https://youtu.be/NGag3kmub9o">https://youtu.be/NGag3kmub9o</a>	Video - Solving Equations containing Radicals
8.7	Complex Numbers	<a href="https://youtu.be/uK99ImJV-Pw">https://youtu.be/uK99ImJV-Pw</a>	Video - Introduction to Complex Numbers and Simplifying Expressions
	also see	<a href="https://youtu.be/hqr1DtXXHpY">https://youtu.be/hqr1DtXXHpY</a>	Ditto - uses term "Transpose" (!)
	also see	<a href="https://youtu.be/KTNcYYHuBTY">https://youtu.be/KTNcYYHuBTY</a>	Ditto - part 2 of above
8.8a	Applications: The Pythagorean Theorem	<a href="https://youtu.be/WqhIG3Vakw8">https://youtu.be/WqhIG3Vakw8</a>	Video - Introduction to the Pythagorean Theorem
	also see	<a href="https://youtu.be/qGRYfXdJKes?t=17">https://youtu.be/qGRYfXdJKes?t=17</a>	Video - Using the Pythagorean Theorem to solve Word Problems
8.8b	Applications: The Distance Formula and the Midpoint Formula	<a href="https://youtu.be/otljzKlnXc">https://youtu.be/otljzKlnXc</a>	Video - Finding the Distance between two points
	also see	<a href="https://youtu.be/2T7m9uYkcuQ">https://youtu.be/2T7m9uYkcuQ</a>	Video - Finding the Midpoint of a Line Segment

## Unit 9 (Functions, Quadratic Equations and Parabolas)

Section	Topic	Resources	Description
9.1	Functions and Function Notation	<a href="https://youtu.be/GQGFMUfr10M">https://youtu.be/GQGFMUfr10M</a>	Video - Finding the Domain of a Function
9.2a	Solving Quadratic Equations: The Square Root Method	<a href="https://youtu.be/mZs5pQ6gAUQ">https://youtu.be/mZs5pQ6gAUQ</a>	Video - Square Root Method of Solving Quadratic Equations
9.2b	Solving Quadratic Equations: Completing the Square	<a href="https://youtu.be/prx_Bf2hakw">https://youtu.be/prx_Bf2hakw</a>	Video - Solving Quadratic Equations by Completing the Square
	also see	<a href="https://youtu.be/1tIXSI-dxZQ">https://youtu.be/1tIXSI-dxZQ</a>	Video - Solving Quadratic Equations by Completing the Square
9.3	The Quadratic Formula	<a href="https://youtu.be/iii7E1m6f9M">https://youtu.be/iii7E1m6f9M</a>	Video - Solving Quadratic Equations using the Quadratic Formula
9.4	Applications: Quadratic Equations	<a href="https://youtu.be/3FtCGHU6xmw">https://youtu.be/3FtCGHU6xmw</a>	Video - Solving "Projectile" problems using Quadratic Equations
	also see	<a href="https://youtu.be/U8Ov-9lfUQE">https://youtu.be/U8Ov-9lfUQE</a>	Video - Solving "Geometry" problems using Quadratic Equations
	also see	<a href="https://youtu.be/OJSwAelOzHc">https://youtu.be/OJSwAelOzHc</a>	Video - Solving "Cost per Person" problems using Quadratic Equations
	also see	<a href="https://youtu.be/03Ox39vvaiM?t=565">https://youtu.be/03Ox39vvaiM?t=565</a>	Video - Solving "Work" problems using Quadratic Equations
	also see	<a href="https://youtu.be/7Q0KrYrW9R0">https://youtu.be/7Q0KrYrW9R0</a>	Video - Solving Various types of Word Problems using Quadratic Equations
9.5	Graphs of Quadratic Equations	<a href="https://youtu.be/_vkHw7caCN4">https://youtu.be/_vkHw7caCN4</a>	Video - Graphing Quadratic Equations
	also see	<a href="https://youtu.be/cFKYrodrXtc">https://youtu.be/cFKYrodrXtc</a>	Video - Graphing Quadratic Equations
9.6	Quadratic Functions: Completing the Square and Applications	<a href="https://youtu.be/WOb25i8FBBw">https://youtu.be/WOb25i8FBBw</a>	Video - Completing the Square
	also see	<a href="https://youtu.be/1tIXSI-dxZQ">https://youtu.be/1tIXSI-dxZQ</a>	Video - Completing the Square