

Math Video Tutorials/Links

Recommended youtube channels to search for videos	
Math Antics	Nanci Pi
PBS Math Club	patrickJMT
MashUp Math	Khan Academy
ViHart	YayMath
Brain POP	TED-Ed
eHow [math]	eHow Education
Colin Dodds [songs]	Don't Memorise
Planet Nutshell (Math Shorts)	

Creating a Growth Mindset in Math	
TOPIC/TITLE	LINK
You can learn anything	https://www.youtube.com/watch?v=JC82Il2cjgA
How to grow your brain	https://www.youtube.com/watch?v=GWSZ1DKjNzY
John Legend: Success through effort	https://www.youtube.com/watch?v=LUTCigWSBsw

Algebra I & II	
TOPIC/TITLE	LINK
<i>Basics</i>	
Number sets (song)	https://www.youtube.com/watch?v=m94WTZP14SA
A brief history of numerical systems - Alessandra King	https://www.youtube.com/watch?v=cZH0YnFpjwU
What is a real number and what are the subsets of real numbers?	https://www.youtube.com/watch?v=tC7NkH5xwBM
Irrational Numbers, Rational Numbers: with real world examples	https://www.youtube.com/watch?v=ORYBFNfs9_g
Making Sense of Irrational Numbers - Ganesh Pai	https://www.youtube.com/watch?v=sbGjr_awePE
Playlist link - Rational/Irrational #s	https://www.youtube.com/watch?v=SQ4cB9yXkHM&list=PLmdFyQYShrjez5JHYWDwIUWX4DMDyQqTq
Complex Numbers - Introduction to Imaginary Numbers	https://www.youtube.com/watch?v=hqr1DtXXHpY
Complex Numbers - Basics	https://www.youtube.com/watch?v=bmsapLZM2Uo
Complex Numbers Powers of i	https://www.youtube.com/watch?v=KTNcYYHuBTY
Logarithms - What is e?	https://youtu.be/_-x90wGBD8U
Exponents & Square roots	https://www.youtube.com/watch?v=C_iKTTI1E34
Order of operations	https://www.youtube.com/watch?v=dAgfnK528RA
Distributive property	https://www.youtube.com/watch?v=n99K96Ektqo&t=234s
Algebraic phrases to expressions	https://www.youtube.com/watch?v=KmuWR_LriQU
Terms, Coefficients, and	https://www.youtube.com/watch?v=W8Fdxt-ncdE

Constants	
Place value	https://www.youtube.com/watch?v=T5Qf0qSSJFI
Rounding	https://www.youtube.com/watch?v=fd-E18EqSVk
Decimals to Fractions	https://www.youtube.com/watch?v=Wwg1br9-8yk
Converting repeating decimals to fractions (part 1 of 2)	https://youtu.be/FPNhCVZlbJs
How big is infinity?	https://www.youtube.com/watch?v=UPA3bwVVzGI
The infinite hotel paradox	https://www.youtube.com/watch?v=Uj3_Kqkl9Zo

Integers

Absolute value	https://www.youtube.com/watch?v=wrof6Dw63Es
Negative numbers	https://www.youtube.com/watch?v=OAoLCXpao6s
Adding & subtracting integers	https://www.youtube.com/watch?v=_BgblvF90UE
Multiplying & dividing integers	https://www.youtube.com/watch?v=K_tPbVPfHgk
Why a negative times a negative makes sense	https://youtu.be/pzQY-9Nmtws
Why a negative times a negative is positive?	https://youtu.be/rK4sXm_MPWo
Why does a negative times a negative equal a positive	https://www.youtube.com/watch?v=U2zLoTG6VFY

Exponents

Negative exponents (multiplying and dividing)	https://www.youtube.com/watch?v=UO9VT5zyrpA
Basic exponent properties	https://youtu.be/Kr16rdBMX4o
Applying the Rules of Exponents - Basic Examples #1	https://youtu.be/wsaH5CARIHl
Applying the Rules of Exponents - Basic Examples #2	https://youtu.be/X72qoK6i2B8
Applying the Rules of Exponents - Basic Examples #3	https://youtu.be/gSYEe-JxS5k
Negative exponents	https://youtu.be/Sqjy1RGYn_M
Exponents and the Laws of Exponents (Powers)	https://www.youtube.com/watch?v=A1wKtiBTsfk
How to Simplify Radicals	https://www.youtube.com/watch?v=BPY7gmT32XE
Square Roots with Variables (Simplifying Math)	https://www.youtube.com/watch?v=XX_MW4fVeTM
<i>Equations</i>	
CPM-Algebra tiles introduction	https://www.youtube.com/watch?v=9uliE4VibnM
Perimeter with Algebra Tiles	https://www.youtube.com/watch?v=P0kg2bZPTKw
Math Antics-Ratios and Rates	https://youtu.be/RQ2nYUBVvqI
Math Antics-Proportions	https://youtu.be/USmit5zUGas
How to Solve Fractions &	https://www.youtube.com/watch?v=O5KrT6xLJ3k&ibss=1

Proportions with Letters	
Understanding Fraction Proportions	https://www.youtube.com/watch?v=yEfkpx-2els&ibss=1
Math Proportion Word Problems	https://www.youtube.com/watch?v=Rbdef8U-j7s&ibss=1
Solving a system of linear equations	https://youtu.be/9MPUSWUyaYU
Solving a system of equations-Substitution method	https://youtu.be/kf-o_CcTKH8
<i>Quadratics</i>	
Completing the square using algebra tiles - Demo	https://www.youtube.com/watch?v=bpJyJlCnR3g
Completing the Square with Visual Models	https://www.youtube.com/watch?v=KiHDyNT0f4Q
<i>Inequalities</i>	
Writing and graphing inequalities	https://youtu.be/oElmCg5fcWU
Solving inequalities using addition and subtraction	https://youtu.be/smX2wklUPvQ
Solving inequalities using multiplying and dividing	https://youtu.be/CiLokLAIYbY
How to solve multi-step inequalities	https://youtu.be/mQYfy7PsNtM
How to solve multi-step inequalities	https://youtu.be/5gi84_mx_to
Multi-step inequalities	https://youtu.be/qPp6v6PflOU

<i>Functions</i>	
Math Antics-What Are Functions?	https://www.youtube.com/watch?v=52tpYl2tTqk&t=545s
Function Rules, Tables, and Graphs	https://youtu.be/M0ipRw4SWhA
How to find the domain and the range of a function given its graph (example) Khan Academy	https://youtu.be/sXP7VhU1gYE
Evaluating Functions in Function Notation	https://www.youtube.com/watch?v=Ruty-OOp1AE
Function Notation and Graphs	https://www.youtube.com/watch?v=Jq6J-Q9ub34
<i>Polynomials</i>	
Algebra Basics: What Are Polynomials? - Math Antics	https://youtu.be/ffLLmV4mZwU
Algebra Basics: Simplifying Polynomials - Math Antics	https://youtu.be/DKC74YKJpNY
Adding and Subtracting Polynomials	https://youtu.be/JQyhGi9rTW0
Subtracting Polynomials with Algebra Tiles	https://youtu.be/4ErAgzUn4VQ
Adding Polynomials using Algebra Tiles	https://youtu.be/It4yX6XSORo
Representing Polynomials with Algebra Tiles	https://youtu.be/C9-XZ9DHTK4

3 Ways to Multiply Binomials	https://youtu.be/sy_2fpY5x7w
How Do I Multiply Binomials Using The Box Method? (No More FOIL!)	https://youtu.be/yYKsrT0E98o
Six year old multiplying binomials	https://youtu.be/g7pnub44Zdo
Example 1: Multiplying a binomial by a binomial Algebra I Khan Academy	https://youtu.be/ZMLFfTX615w
Greatest Common Factor	https://youtu.be/y4MG3m5uJQg
Polynomial Factoring The Greatest Common Factor (GCF)	https://youtu.be/Y1Vd5wb0rnM
GCF to Factor a Polynomial	https://youtu.be/FvS7v6KM1ig
How to Factorize Using the Highest Common Factor	https://youtu.be/zqmWRUORwOU
How Do I Factor a Difference of Two Squares? Common Core Algebra	https://youtu.be/rMF_SX0SgB8
Factor Difference Two Squares	https://youtu.be/Kum7fQesA6M
Factoring the Difference of Two Squares	https://youtu.be/BALzzQtchpk
Factoring Quadratics... How?	https://www.youtube.com/watch?v=YtN9_tCaRQc
The mathematical secrets of Pascal's Triangle	https://www.youtube.com/watch?v=XMriWTvPXHI

Geometry	
TOPIC/TITLE	LINK
The XY Plane and How to Plot Points	https://youtu.be/4x6yagsoDjE
How to Graph on a Coordinate Plane	https://youtu.be/221I0cDGsB4
The Coordinate Plane	https://www.youtube.com/watch?v=_ieJLOfxdjU&feature=youtu.be
Math Antics-The pythagorean theorem	https://www.youtube.com/watch?v=WqhlG3Vakw8
Pythagorean Theorem	https://youtu.be/JDmgIbduKvE
Pythagorus' Theorum - Math Lessons - sides	https://youtu.be/z8_573LGKj4
Pythagoras Theorem - Word Problem	https://youtu.be/tnF7Ezd6qal
The infinite life of pi	https://www.youtube.com/watch?v=9a5vHXsUvUw
Celebrate Pi Day: Fun Pi Day Facts	https://www.youtube.com/watch?v=6TPjRoWm8Ck
Math Antics - Circles, What Is PI?	https://www.youtube.com/watch?v=cC0fZ_lkFpQ&t=106s
Pi Explained	https://www.youtube.com/watch?v=Ef1vhP4_MjA

Rotation	https://www.youtube.com/watch?v=1sxml4Y1K3s&t=44s
Translation	https://www.youtube.com/watch?v=gBGW7JbGcl8&t=5s
Reflection	https://www.youtube.com/watch?v=A8fX2Drlpng

Pre-Calculus	
TOPIC/TITLE	LINK

Statistics	
TOPIC/TITLE	LINK
Mean, Median, and Mode	https://www.youtube.com/watch?v=B1HEzNTGeZ4&ibss=1
What is Mean, Median, & Mode in Mathematics	https://www.youtube.com/watch?v=onSebaCChTg&ibss=1
Finding Mean, Median, and Mode Descriptive Statistics	https://www.youtube.com/watch?v=k3aKKasOmlw&ibss=1
How to Calculate Standard Deviation	https://www.youtube.com/watch?v=WVx3MYd-Q9w&ibss=1
Standard Deviation - Explained and Visualized	https://www.youtube.com/watch?v=MRqtXL2WX2M&ibss=1

Medical Math	
TOPIC/TITLE	LINK
Metric system (Why created?)	https://www.youtube.com/watch?v=7bUVjWA6Vw&t=225s
Metric system intro (Bill Nye)	https://www.youtube.com/watch?v=MekxJse2vgs&t=193s
Accuracy & Precision in Measurements	https://www.youtube.com/watch?v=hnU7hoxPEs8
How to measure the volume of an irregular solid	https://youtu.be/RoKCwl3echA
Finding volume by displacement	https://youtu.be/e0geXKxeTn4
Dimensional Analysis (Unit Conversion the Easy Way)	https://www.youtube.com/watch?v=HRe1mire4Gc
Steps of dimensional analysis	https://www.youtube.com/watch?v=fmZ5uQjA_tg
Unit Conversion & Significant Figures: Crash Course Chemistry #2	https://www.youtube.com/watch?v=hQpQ0hxVNTg
Significant Figures: Rules made easy	https://www.youtube.com/watch?v=Sno64ghj7nA
Significant Figures (song)	https://vimeo.com/46667405
Sig Fig Rules! (Significant Figures Rules & Examples)	https://www.youtube.com/watch?v=TZIPNzc5yT0
Rounding to significant figures	https://www.youtube.com/watch?v=8Rkz4UuFS_k
Significant Figures-Add & Subtract	https://www.youtube.com/watch?v=eXepPX6kQ3o&t=6s
Adding and Subtracting Significant Figures (Rules and Examples)	https://www.youtube.com/watch?v=IBPxrPtq5rk

Significant Figures-Multiply & Divide	https://www.youtube.com/watch?v=ZtLme1qcB30
Significant Figures Multiplication and Division (Rules and Examples)	https://www.youtube.com/watch?v=wNEXN8z2GmA
Scientific Notation and Standard Form Explained with Practice Problems How to Pass Chemistry	https://www.youtube.com/watch?v=6y35Jlz332M
Scientific Notation	https://www.youtube.com/watch?v=DXTuYjPDjqQ
Scientific Notation (song)	https://www.youtube.com/watch?v=AWof6knvQwE
Scientific Notation Conversion	https://youtu.be/Q_kLmTSyyw
Scientific Notation - Multiplying and Dividing	https://www.youtube.com/watch?v=UADVIDjdaVg&t=14s
Scientific Notation - Adding and Subtracting	https://www.youtube.com/watch?v=p0zVNTko7z4&t=4s