

Official Resource to be used by MESA Teachers:

Math Concepts Student & Teacher Resources

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Notes

- [CA CCSS Link](#) - Click on each standard to view
 - [BreakoutEdu Link](#) - Probable games are bookmarked on site (My Games → Bookmark Games)
 - MS = for Middle School
 - HS = for High School
 - How to use the table of content to quickly navigate this document:
 - Click on the blue titles in the table of content to view that particular section and its contents
 - To return to the table of content simply click on "TOC"
 - How to navigate through the linked content in this resource:
 - Resources in **BLUE** color font are linked to free resources.
 - Resources in **PURPLE** color font are linked to the online platform. You are welcome to purchase and download for your use in your classroom/club. These items are not pre-paid through MESA.
- **NOTE:** Most Khan Academy links include videos, practice, and a quiz

Recommended Online Platforms

Platform	Overview	Notes
Prodigy Click link above to access	Prodigy's educational content is free for everyone. Prodigy's freemium approach ensures that all of our in-game educational content remains completely free. This unique and unrivaled access is only possible through the support provided by optional memberships.	○ Teacher Guide ○ Student Guide

Middle School

Concept	Standards	Games
Geometric Shapes	6th Grade CCSS.MATH.CONTENT.6.G.A.1 CCSS.MATH.CONTENT.6.G.A.2 CCSS.MATH.CONTENT.6.G.A.3 CCSS.MATH.CONTENT.6.G.A.4	
	7th Grade CCSS.MATH.CONTENT.7.G.B.4 CCSS.MATH.CONTENT.7.G.B.6	
	8th Grade CCSS.MATH.CONTENT.8.G.A.2 CCSS.MATH.CONTENT.8.G.A.3 CCSS.MATH.CONTENT.8.G.A.4	Game Pre-Algebra EOY Review Escape Activity (Link to Website)
Khan Academy 6th Grade Unit: Geometry 7th Grade Unit: Geometry 8th Grade: Cylinder Volume & Surface Area	Video Recognizing shapes Describing 2-D Shapes Describing 3-D Shapes	Practice - Worksheet: Popcorn Problem - Worksheet: Bubble Gum
Two-& Three-Dimensional Figures	6th Grade CCSS.MATH.CONTENT.6.G.A.4	
	7th Grade CCSS.MATH.CONTENT.7.G.B.6	
	8th Grade CCSS.MATH.CONTENT.8.G.A.2 CCSS.MATH.CONTENT.8.G.A.3 CCSS.MATH.CONTENT.8.G.A.4 CCSS.MATH.CONTENT.8.G.C.9	
Desmos Polygraph: Shape the Bucket Polygraph: Identify 3D Figures	Video Recognizing shapes Recognizing common 3D shapes Describing 2-D Shapes Describing 3-D Shapes Slicing Three Dimensional Figures	Practice Activity: Area & Volume Measurement Formula Cut & Paste (Link to Website) - Activity: Shape and Formula Match
Surface Area & Circumference	6th Grade CCSS.MATH.CONTENT.6.G.A.4	
	7th Grade	Game:

	CCSS.MATH.CONTENT.7.G.B.4 CCSS.MATH.CONTENT.7.G.B.6	• Circle Center Secrets ◦ Teacher Guide • Let the Games Begin ◦ Teacher Guide • Escape Room: Volume & Surface Area of Prisms and Pyramids (Link to Website)
	8th Grade CCSS.MATH.CONTENT.8.G.C.9	Game: • Volume & Surface Area Bingo • Pre-Algebra EOY Review Escape Activity (Link to Website)
Khan Academy • Surface Area Review • Expressions to find surface area • Circumference review • Circumference of a circle	Video • Surface Area of a box • Surface Area of a triangular prism • Surface Area of rectangular prisms • 6th Grade - The Surface Area Song • Circles, Circumference & Area	Practice • Worksheet: Diameter & Circumference • Worksheet: Surface Area of Prisms and Cylinders • Worksheet: Surface Area of Prisms, Pyramids, Cylinders, and Cones
Probability	6th Grade CCSS.MATH.CONTENT.6.SP.A.2 CCSS.MATH.CONTENT.6.SP.A.3 CCSS.MATH.CONTENT.6.SP.B.4 CCSS.MATH.CONTENT.6.SP.B.5 A,B & C	
	7th Grade CCSS.MATH.CONTENT.7.SP.A.1 CCSS.MATH.CONTENT.7.SP.A.2 CCSS.MATH.CONTENT.7.SP.B.4 CCSS.MATH.CONTENT.7.SP.C.5 CCSS.MATH.CONTENT.7.SP.C.7A & B CCSS.MATH.CONTENT.7.SP.C.8 A & B	Game • Probability "Fly-Swatter Bingo" (Link to Website)
	8th Grade CCSS.MATH.CONTENT.8.SP.A.1 CCSS.MATH.CONTENT.8.SP.A.2 CCSS.MATH.CONTENT.8.SP.A.3 CCSS.MATH.CONTENT.8.SP.A.4	Game • Pre-Algebra EOY Review Escape Activity (Link to Website)
Khan Academy • Unit: Statistics and Probability • Desmos: Chance Experiments	Video • Math Antics - Basic Probability • Mashup Math - Probability Model Math Activity	Practice • Worksheet: Simple Probability Puzzle (Link to Website)
Rational & Irrational Numbers	6th Grade CCSS.MATH.CONTENT.6.NS.C.5 CCSS.MATH.CONTENT.6.NS.C.6 CCSS.MATH.CONTENT.6.NS.C.6.C CCSS.MATH.CONTENT.6.NS.C.7	

	CCSS.MATH.CONTENT.6.NS.C.7.B,C	
	7th Grade CCSS.MATH.CONTENT.7.NS.A.1 CCSS.MATH.CONTENT.7.NS.A.1.B,C,D CCSS.MATH.CONTENT.7.NS.A.2A,B,C,D CCSS.MATH.CONTENT.7.NS.A.3	
	8th Grade CCSS.MATH.CONTENT.8.NS.A.1 CCSS.MATH.CONTENT.8.NS.A.2	
Khan Academy Unit: Irrational Numbers	Video Properties o Rational & Irrational Numbers	Practice Sorting Activity: Classifying Rational & Irrational Numbers
Equations and Inequalities	6th Grade CCSS.MATH.CONTENT.6.EE.B.5 CCSS.MATH.CONTENT.6.EE.B.7 CCSS.MATH.CONTENT.6.EE.B.8	Game Spin to Win - Order of Operations (Link to Website)
	7th Grade CCSS.MATH.CONTENT.7.EE.B.4A,B	Game One Step Equation Koosh(Link to Website)
	8th Grade CCSS.MATH.CONTENT.8.EE.A.2 CCSS.MATH.CONTENT.8.EE.C.7A,B CCSS.MATH.CONTENT.8.EE.C.8A,B,C	Game Multistep Equations Rolling Review(Link to Website) Pre-Algebra EOY Review Escape Activity (Link to Website)
Khan Academy Unit: Expressions, Equations, & Inequalities Unit: Coordinate Plane	Video Math Antics - Solving Basic Equations Part 1 Math Antics - Solving Basic Equations Part 2 Math Antics - Basic Inequaties Introduction to Inequalities	Practice Activity: Two Step Equations Plugging Away Relay(Link to Website) Activity : Multi Step Equations Plugging Away Relay (Link to Website) Activity: Translating Expressions, Equations, & Inequalities Walk About (Link to Website) - Worksheet: Equation & Inequality Practice Sheet
Fractions & Percentages	6th Grade CCSS.MATH.CONTENT.6.NS.A.1 CCSS.MATH.CONTENT.6.RP.A.3.C	
	7th Grade	

	CCSS.MATH.CONTENT.7.RP.A.1 CCSS.MATH.CONTENT.7.RP.A.3 CCSS.MATH.CONTENT.7.NS.A.1 CCSS.MATH.CONTENT.7.NS.A.2 CCSS.MATH.CONTENT.7.NS.A.2.A	
	8th Grade	Game Pre-Algebra EOY Review Escape Activity (Link to Website)
Khan Academy Unit: Fractions, Decimals, & Percentages	Videos Keep Change Flip - Dividing Fractions	Practice: - Worksheet: Fractions, Percents & Decimals - Worksheet: Fractions, Decimals, & Percents

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High School

Concept	Standards	Games
Geometric Shapes	CCSS.MATH.CONTENT.HSG.MG.A.1 CCSS.MATH.CONTENT.HSG.MG.A.2 CCSS.MATH.CONTENT.HSG.GMD.A.3	Game Pre-Algebra EOY Review Escape Activity (Link to Website) Geometry Confusion Teacher Guide
Formula Sheet Volume & Surface Area Formula Sheet Circle Formulas Formula Handout	Video Geometry Review Area & Geometry Math Antics - Volume	Practice - Activity: Shape and Formula Match - Worksheet: Geometry Review Volume & Surface Area - Worksheet: Surface Area & Volume of 3D Shapes
Two-&-Three-Dimensional Figures	CCSS.MATH.CONTENT.HSG.GMD.A.3 CCSS.MATH.CONTENT.HSG.GMD.B.4	Game Press your luck! NOTE: File requires download in POWERPOINT AND present as SLIDESHOW for all features to work

Khan Academy • Lesson: 2D vs. 3D Objects	Video • Math Antics - Area • Math Antics - Volume	Practice • Worksheet: Polynomials: Perimeter, Area, Volume ◦ LINK TO Website • Worksheet: Composite Surface Area & Volume
Surface Area & Circumference	6th Grade CCSS.MATH.CONTENT.6.G.A.4	Game • Escape Room: Volume & Surface Area of Prisms and Pyramids (Link to Website) • Pre-Algebra EOY Review Escape Activity (Link to Website)
	7th Grade CCSS.MATH.CONTENT.7.G.B.4 CCSS.MATH.CONTENT.7.G.B.6	
	8th Grade CCSS.MATH.CONTENT.8.G.C.9	
Khan Academy • Unit: Solid Geometry	Video • Find the Surface Area of Prisms & Cylinders	Practice • Worksheet: Hop on into the Party • Worksheet: Volume & Surface Area Complex Solids • Stations: Surface Area & Volume
Probability	CCSS.MATH.CONTENT.HSS.CP.B.6 CCSS.MATH.CONTENT.HSS.CP.B.7 CCSS.MATH.CONTENT.HSS.CP.B.8 CCSS.MATH.CONTENT.HSS.CP.B.9	Game • Pre-Algebra EOY Review Escape Activity (Link to Website) • Carnival Game Crazyiness ◦ Teacher Guide
Khan Academy • Unit: Probability • Video: Dependent Probability Introduction Reference Sheet • Independent and Dependent Events of Probability	Video • Introduction to Probability, Basic Overview • Compound Probability • Multiplication & Addition Rule - Probability • Using Probability in Search & Rescue Operations	Practice • Activity: Compound Probability Math Lib • Activity: Compound Probability Task Cards(Link to Website)
Rational & Irrational Numbers	CCSS.MATH.CONTENT.HSN.RN.B.3	Game
Khan Academy • Unit: Irrational Numbers	Video • Properties of Rational & Irrational Numbers Explained • Converting Rational Numbers	Practice • Rational vs Irrational Maze • Rational or Irrational Coloring Worksheet (Link to Website)

Equations & Inequalities	CCSS.MATH.CONTENT.HSA.REI.A.2 CCSS.MATH.CONTENT.HSA.REI.B.3 CCSS.MATH.CONTENT.HSA.REI.B.4 CCSS.MATH.CONTENT.HSA.REI.C.6 CCSS.MATH.CONTENT.HSA.REI.C.7 CCSS.MATH.CONTENT.HSA.REI.D.12	Game Pre-Algebra EOY Review Escape Activity (Link to Website)
Khan Academy Unit: Solving Equations & Inequalities Unit: Intro to Pythagorean Theorem	Video Solving Inequalities How to solve 2-Step Inequalities How to solve Linear Equations with Variables on both sides Pythagorean Theorem	Practice Activity: Multi-Step Equations Math Lib (Link to Website) Activity: Multi-Step Inequalities Math Lib (Link to Website) - Activity: Solving Linear Systems of Equations & Inequalities Stations
Fractions & Percentages <i>*Same as Middle School</i>	6th Grade CCSS.MATH.CONTENT.6.NS.A.1 CCSS.MATH.CONTENT.6.RP.A.3.C	
	7th Grade CCSS.MATH.CONTENT.7.RP.A.1 CCSS.MATH.CONTENT.7.RP.A.3 CCSS.MATH.CONTENT.7.NS.A.1 CCSS.MATH.CONTENT.7.NS.A.2 CCSS.MATH.CONTENT.7.NS.A.2.A	
	8th Grade	Game Pre-Algebra EOY Review Escape Activity (Link to Website)
Khan Academy Unit: Fractions, Decimals, & Percentages	Videos Keep Change Flip - Dividing Fractions	Practice: - Worksheet: Fractions, Percents & Decimals - Worksheet: Fractions, Decimals, & Percents

PASSCODE (Math Challenges):

Middle School 1.1 2.1 3.1	High School <i>pending</i>
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References:

- Teachers Pay Teachers

- Math-Aids.com -
https://www.math-aids.com/cgi/pdf_viewer_4.cgi?script_name=geometry_surfPrisCyl.pl&p_types=0&inc_h=1&feet=1&yard=1¢i=1&language=0&memo=&answer=1&x=111&y=28
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