

Common Core 7th Grade Math Standard: Know the formulas for the area and circumference of a circle and use them to solve problems; given an informal derivation of the relationship between the circumference and area of a circle. (7.G.4)

Title of Tutorial	URL	Functionality on Multiple Browsers	Cost	Suitability for Diverse Learners	Overall Recommendation (1-7)	Comments or Justification
Introduction to Circles	http://artofproblemsolving.com/videos/prealgebra/chapter11/210	Operates on multiple browsers	Free	Yes, learners have a visual of the radius forming a circle and ratio of circumference and diameter staying the same.	4, demonstrator is direct with explanation but ends the tutorial with a problem that users may not understand even with the previous explanation	The demonstrator explains the definition of circle using a computer program showing the radius moving around the center of the circle. Explains what the circumference of a circle is, and uses a computer program to manipulate the circumference for users to see the relationship stays the same. The demonstrator concludes with a problem where the user is applying parts of a circle to solve for the circumference.
What is circumference?	http://www.virtuallnerd.com/middle-math/geometry-measurement/circle-circumference-area/circle-circumference-formula	Operates on multiple browsers	Free	Yes, the video is short for users with a short attention span to follow along.	5	The video efficiently explains how to find circumference using the diameter or radius. User follows along with demonstrator doing the problem, but once the problem is explained the video ends.
Area of Circle	https://www.khanacademy.org/math/basic-geo/basic-geo-area-perimeter/basic-geo-area-circumference/v/area-of-a-circle	Operates on multiple browsers	Free	Yes, the video is short and the demonstrator goes over one example.	7	Users only hear the demonstrator's voice while he solves an area problem. Once users watch the video they have the opportunity to practice finding area with immediate feedback on whether they solved correctly.
Use Circumference to Solve for Area	https://learnzillion.com/lesson_plans/6770-use-circumference-	Operates on multiple browsers	Free	Yes, the demonstrator has the script on the	6	Colorful and animated video where the demonstrator solves two examples of finding the area of a circle when only given the diameter. The first example

	to-solve-for-area#fndtn-lesson			screen while she speaks		involves not approximating pi and the second example involved approximating pi.
Circles	https://www.braintpop.com/math/geometryandmeasurement/circles/	Operates on multiple browsers	\$220/yr for teacher access	Yes, captures attention of the user	7	Entertaining animated movie with Tim and robot Moby explaining the parts of a circle, formulas of circumference and area, and the pi explanation. Once users watch the video, they can take a quiz to check for understanding by answering all the questions at once or use review mode to answer one question at time for immediate feedback.

Common Core 7th Grade Math Standard: Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. (7.NS.1) Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. (7.NS.2)

Title of Tutorial	URL	Functionality on Multiple Browsers	Cost	Suitability for Diverse Learners	Overall Recommendation (1-7)	Comments or Justification
Number Types (Math Song)	https://www.youtube.com/watch?v=m94WTZP14SA	Operates on multiple browsers	Free	Yes, the song has a catchy beat for users to easily classify numbers	5	Colin Dodds has a YouTube channel of songs for different math concepts. In this tutorial, he sings about natural, whole, integer, and rational numbers displaying their relationship using a number line and Venn diagram. He ends the song with four different examples of classifying the numbers.
Arithmetic Operations with Fractions	https://www.youtube.com/watch?v=xZ1DVB332EM	Operates on multiple browsers	Free	Yes, the user has a visual of a number line and fraction tiles before practicing with concepts	6	Animated video where a cartoon professor defines a fraction using a number line. He continues to explain the meaning behind each operation with fractions using a number line and fraction tiles before using algebraic properties to explain multiplication of mixed numbers.

Adding and Subtracting Rational Numbers	http://www.broandsismathclub.com/search/label/7th_Grade%20Math	Operates on multiple browsers	Free	No, the demonstrator moves through the problems rather quickly and uses vocabulary that users may need defined before moving on	4, the demonstrator spoke fairly quickly but users may enjoy knowing she is a student herself	Bro and Sis Math Club is a site developed by a brother and sister duo who wanted to make math videos to help their classmates and other peers. The demonstrator simplified adding and subtracting rational numbers by giving examples with whole numbers, decimals, and fractions. The final problems mixed whole numbers and rational numbers.
Adding and Subtracting Rational Numbers	https://www.sophia.org/tutorials/7th-grade-1-6t-adding-and-subtracting-rational-num#recommended_rating_block	Operates on multiple browsers	Free	Yes, the demonstrator gives tips throughout the video about common mistakes learners make when solving these types of problems.	5, the demonstrator made a couple of mistakes while speaking	The demonstrator starts with defining rational numbers, uses the drawn number line, and gives real world examples of adding and subtracting integers. He moves to solving problems with fractions with borrowing. He saved decimals for last since those are typically easier for learners.
Multiplying and Dividing Rational Numbers	http://www.ck12.org/user:c2ZveDJAb3N3ZWdyLm9yZw../book/Oswego-City-School-District--Grade-7-Common-Core/section/2.0/	Operates on multiple browsers and instructor can download as a PDF	Free	Yes, at the end of each section learners have the ability click another site for more practice	7	The written explanation seems overwhelming at first, but the information is illustrated and chunked for users. After each section, a link is posted to other sites or videos to practice each section. The explanation begins with modeling multiplying and dividing whole numbers before moving to model the same operations with fractions, properties of multiplication, division, and mixed practice.