

# **Trigonometry Topics & Resources**

Updated March 2020



### **Key Topics**

#### **Key Topics Covered in Trigonometry**

- → Pythagorean Theorem
- → Trigonometric Functions
  - ◆ Sine, cosine & tangent
  - Solving for sides & angles of right triangles using trigonometric ratios
  - Recipricol identities (secant, cosecant & cotangent)
  - Trigonometric ratios & similarity
  - Trigonometric ratios of special triangles
- → Unit Circle
  - ◆ Degrees & radians
  - Unit circle definition of trigonometric functions
  - Pythagorean identity
  - Value of trigonometric functions for special angles
  - Introduction to polar coordinates

- → Graphing the Trigonometric Functions
  - Graphs of trigonometric functions
  - Amplitude and period of trigonmetric functions
  - Range & domain of trigonometric functions
- → Trigonometric Equations and Identities
  - Inverse trigonometric functions (arcsin, arccos, arctan)
  - ◆ Sum and difference formulas
  - Double and half angle formulas
  - Even and odd trigonometric functions
  - ◆ Cofunction identities
  - Sum to product & product to sum forumlas
- → Trigonometry with General Triangles
  - Law of sines & law of cosines



## Trigonometry

#### Additional Resources

- → <a href="https://www.khanacademy.org/math/trigonometry">https://www.khanacademy.org/math/trigonometry</a>
- → <a href="https://opus.govst.edu/cgi/viewcontent.cgi?article=1176&context=capstones">https://opus.govst.edu/cgi/viewcontent.cgi?article=1176&context=capstones</a>
- → <a href="http://tutorial.math.lamar.edu/Extras/AlgebraTrigReview/TrigIntro.aspx">http://tutorial.math.lamar.edu/Extras/AlgebraTrigReview/TrigIntro.aspx</a>
- → <a href="http://tutorial.math.lamar.edu/pdf/Trig">http://tutorial.math.lamar.edu/pdf/Trig</a> Cheat Sheet.pdf
- → <a href="http://www.softschools.com/math/trigonometry/">http://www.softschools.com/math/trigonometry/</a>
- → <a href="http://www.pstcc.edu/facstaff/jwlamb/1910/unitcircletrigreview.pdf">http://www.pstcc.edu/facstaff/jwlamb/1910/unitcircletrigreview.pdf</a>
- → <a href="http://web.mit.edu/jorloff/www/18.01a-esg/OCWTrig.pdf">http://web.mit.edu/jorloff/www/18.01a-esg/OCWTrig.pdf</a>
- → <a href="https://www.mathsisfun.com/algebra/trigonometry.html">https://www.mathsisfun.com/algebra/trigonometry.html</a>
- → https://www.ocf.berkeley.edu/~daradib/chsntech/review/math/review-trig.pdf
- → http://jwilson.coe.uga.edu/EMAT6680/Adcock/Adcock6690/RLAInstructUnit1/RLATrigMenu.htm

