

Comp Math

Sum/diff

- What two integers have a sum of 89 and a difference of 15?

Divisibility Rules

- 3, 9
- 4, 8
- 11

Quick Quotients

- 9ths
- 11ths
- 7ths

Area/Volume

- Area of a Circle, Ellipse
- Area of a triangle
- Area of equilateral triangles
- Area of a trapezoid
- Volume of a prism/cylinder
- Volume of a pyramid/cone
- Volume of a sphere
- Edge, Diagonal, Surface Area, Volume of Cube

Complex Numbers

- Sums
- Products
- Quotients
- Argand Diagrams
 - Powers
 - Modulus/Absolute value

Combinatorics

- Triangular Numbers
- Multiplication Principle
- Permutations/Combinations

Geometry

- Platonic Solids
- Golden Ratio
 - Fibonacci
 - Phi
- Euclid & the Elements
 - Five Postulates
 - Proof

Pythagorean Triples

- 3,4,5
- 5,12,13
- 8,15,17
- 7,24,25

Powers

- Know your powers!
 - 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024
 - 3, 9, 27, 81, 243, 729
 - 4, 16, 64, 256, 1024
 - 5, 25, 125, 625, 3125
 - 6, 36, 216, 1296
 - 7, 49, 343, 2401
 - 8, 64, 512,

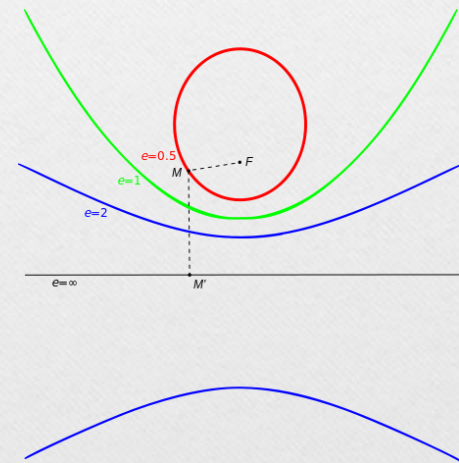
Logarithms

Quadratic Formula

- Discriminant

Conic Sections

- Circle, Ellipse, Parabola, Hyperbola
- Geometrically
 - Eccentricity
- Algebraically
 - Equations in cartesian coordinates



Trigonometry

- Six basic functions (sin, cos, tan, cot, sec, csc)
- Definitions based on right triangles
- Definitions based on unit circle
- 30-60-90, 45-45-90
- Basic identities
 - Reciprocal relationships
 - Pythagorean identities

Statistics

- Mean problems

Vectors and Matrices

- Dot product
- Determinant
- Multiplying matrices

Calculus

- Derivatives/differentiation
 - applications
- Integrals/integration
 - Area under the curve