Are you ready? Here is a 5×5 checklist

Geometry:

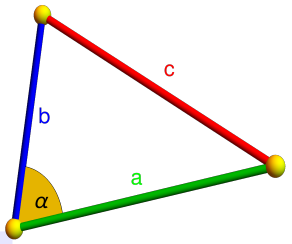
Triangles: right, isosceles, equilateral, obtuse, acute

Pythagorean theorem $a^2 + b^2 = c^2$

Cos-formula $c^2 = a^2 + b^2 - 2ab\cos(\alpha)$

Sin-formula $a/\sin(\alpha) = b/\sin(\beta) = c/\sin(\gamma)$

Lines, parabola, circles, ellipses, hyperbola



Functions:

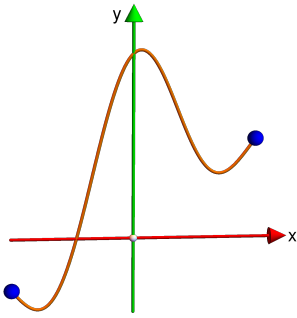
Functions, notation like x^n,$\sqrt{x+1}$, $x^{-3/4}$ $(1+x)^n$, 2^x

Square roots and higher order roots $\sqrt[n]{x}$

Log and Exp $\log(x) = \ln(x)$ **and** e^x **and** $a^x = e^{x\log(a)}$

Trig functions $\sin, \cos, \tan, \cot, \sec, \csc$

Inverse trig functions: $\arctan, \arcsin, \arccos$



Algebra:

Solving linear and quadratic equations

Add, multiply, divide and factor polynomials

Exp laws $a^b a^c = a^{b+c}$, $(a^b)^c = a^{bc}$, $a^b = e^{b\log(a)}$

Trig identities $\sin^2(x) + \cos^2(x) = 1$, $\cos^2(x) = (1 + \cos(2x))/2$

Log identities $\log(xy) = \log(x) + \log(y)$,$\log(a^b) = b\log(a)$

Derivatives:

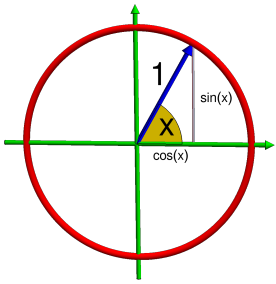
Mechanisms for discontinuity, Hôspital

Product, quotient and chain rule

Find extrema using first derivative test

Find critical point using second derivative test

Taylor formula $f(x) = f(0) + f'(0)x + f''(0)x^2/2 + \ldots$



Integrals:

Integration by parts like $\int x^5 \cos(x) dx$

Integration by substitution like $\int \log(x)/x dx$

Partial fractions like $2/(1-x^2) = 1/(1+x) + 1/(1-x)$

Convergence of $\int_0^1 x^s\, dx$ **or** $\int_1^\infty x^s dx$

FTC $\int_0^x f'(t)\, dt = f(x) - f(0)$ $\qquad$ $(\int_0^x f(t)\, dt)' = f(x)$