Summary
(By Chapter)

1. Simple functions
Displaying numbers neatly
Right-justified numbers
INT, the integral part of a number
ABS, the absolute value of a number
Rounding off numbers
Rounding up and down
Rounding off a number to D decimal places
Bank balances
Overdrawn bank balances
SGN, the sign or signum function
Displaying bank balances colourfully

2. Trigonometry
Scale drawings
Estimating heights and distances
Right-angled triangles
Trigonometric functions, TAN, SIN and COS
Hypotenuse, opposite side, adjacent side
Radian
PI
Degrees to radians, radians to degrees
Finding lengths of a right-angled triangle
Inverse functions
Arc tangent, ATN
Arc sine, ASN
Arc cosine, ACS
Pytharogas' theorem
Non right-angled triangles
Law of cosines
Law of sines
Finding angles and/or sides of a triangle
Refraction
Angle of incidence, angle of refraction
Snell's law
Refractive index
Reflection
Critical angle

Arithmetic sequence, arithmetic progression
Common difference
Generating arithmetic sequences
Which would you prefer?
Geometric sequence, geometric progression
Common ratio
Generating geometric sequences
Interest, compound interest
Daily interest
Double or quit gambling
Fibonacci sequences
Generating Fibonacci sequences

6. Number bases
Decimal system
Digits
Decimal representation
Base
Coefficients of a number N to a base B
Binary number system
Hexadecimal numbers
Converting numbers from one base to another
Numbers on computers
PEEKing at numbers
Binary form of numbers between 0 and 1
Displaying binary from of numbers between 0 and 1
Floating points
Binary exponent
Binary mantissa

7. Days and weeks
Days of the week
Zeller' s congruence
Finding the day of the week for any given date
Displaying a monthly calendar for any month, any year
Date management
Pseudo-Julian date
Listing dates a specified number of days apart

8. Greatest common divisor
Common divisor, common factor
Greatest common divisor, highest common factor
Euclidean algorithm
Calculating the greatest common divisor

Least common multiple
Calculating the least common multiple

9. Primes
Prime number
Composite number
There are infinitely many prime numbers
Sieve of Erastosthenes
Prime testing
Finding factors
Large primes
Mersenne numbers, Mersenne primes
Largest known prime
Probabilistic primality testing
Fermat' s little theorem
Pseudoprime to a base
Most pseudoprimes are genuine primes

10. Odds and ends
Pythagorean triplets
Primitive Pythagorean triplets
Multi-precision powers
Calculating products of large numbers accurately on your computer
Calculating arbitrary large powers accurately

11. Matrices
Matrices, rectangular arrays of numbers
M by N matrix
Square matrix
Adding matrices
Why add matrices
Matrix multiplication
Why multiply matrices?
Zero matrix
Identity matrix
Inverse of a matrix, reciprocal of a matrix
Calculating the inverse of a matrix
Simultaneous matrices
Solving simultaneous matrices

12. Codes
Cryptography
Ciphers
Substitution codes

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