

Index

- absolute value, 42
- addition of real numbers, 81, 87
- algebraic axioms, 7
- approximate an ide, 79
- Archimedean Axiom, 8
- axiom, 8

- bijection, 68
- binary operation, 86
- bounded above, 18
- bounded set, 18

- cardinality, 94
- closed interval, 15
- common divisor, 2
- common logarithm, 65, 70
- common refinement partition, 56
- complete number line, 36
- Completeness Axiom, 36
- composition of functions, 46
- continuity, 82
- continuous at x , 44
- continuous function, 44
- converge, 16, 23
- countably infinite set, 95
- covering of a set, 49

- difference of real numbers, 85
- differentiable at a point, 58
- differentiable function, 59
- digit, 22
- divides, 2
- divisor, 2
- domain of a function, 16

- downset, 106

- Euler number e , 48
- exponent, 69

- finite set, 94
- fraction, 3
- function, 16

- geometric sum, 18
- ghost downset, 106
- greatest common divisor, 2
- greatest integer, 8
- greatest lower bound, 18

- ide, 22
- increasing, 18
- increasing function, 68
- infinite set, 94
- initial segment, 76
- integral, 55
- inverse of a real number, 88

- least upper bound, 18
- limit of a sequence, 17
- limit point of a set, 15
- logarithm base b , 65
- logarithm-base- b , 70
- long division, 9
- lower bound of a set, 18
- lower sum, 54

- maximum of a function, 50
- measure of a set, 98
- minimum of a function, 50

- multiplication of real numbers, 81, 87
- n-th root, 48
- natural logarithm, 67
- negation, 86
- negative real number, 86
- non-decreasing, 18
- number line, 8

- one-to-one function, 68
- onto function, 68
- open interval, 15
- order axioms, 7
- order of real numbers, 77, 86

- partial binary operation, 86
- partition of an interval, 54
- polynomial function, 46
- positive real number, 86
- prime, 2
- product of functions, 46

- quotient, 9

- range of a function, 16
- rational downset, 106
- real number, 76
- reduced fraction, 3
- refinement of a partition, 56
- relatively prime, 2
- remainder, 9
- repeating decimal, 25
- represent a number, 23

- sequence, 16
- standard ide, 28
- subtraction of real numbers, 85, 88
- sum of a sequence, 17
- sum of functions, 46

- unary operation, 86
- uncountably infinite set, 96
- uniform continuity, 49
- upper bound, 18
- upper bound of a set, 18
- upper sum, 54