NTCIR11-Math2–1

Formula Query: $\square{\text{square}}(\square{\text{phi}}) = id$
Formula Query: $\square{\text{phi}} \neq id$
Keyword: hyperelliptic surface
Keyword: Riemann

NTCIR11-Math2–2

Formula Query: $ImP_{\gamma}^{\square{+}} = C_{\mu}^{\square{+}}(\gamma)$
Keyword: Lisboa
Keyword: Cauchy

NTCIR11-Math2–3

Formula Query: $\square{\text{L}}\!\!\not{}_{d-\square{\text{k}}} = \square{\text{L}}_{\square{\text{k}}}$
Keyword: geodesic interval
Keyword: symmetric

NTCIR11-Math2–4

Formula Query: $\square{\text{B}}\sigma_3\square{\text{B}} = \sigma_3$
Keyword: invariance
Keyword: point
Keyword: interaction

NTCIR11-Math2–5

Formula Query: $S_{EH} = \frac{1}{G_3}\square{\text{o}}d^3x\sqrt{-g^{(3)}}$
Keyword: entropy
Keyword: bound
Keyword: Bekenstein-Hawking

NTCIR11-Math2–6

Formula Query: $\square{\text{S}} = -\square{\text{T}}_{\square{\text{p}}}\int\square{\text{d}}^{\square{\text{p}}+1}\square{\text{x}}\sqrt{\square{\text{g}}}$
Keyword: brane
Keyword: action
Keyword: cosmological

NTCIR11-Math2–7

Formula Query: $\boxed{\text{x}}\frac{\boxed{\text{y}}}{\boxed{\text{z}}} - \boxed{\text{u}}\frac{\boxed{\text{v}}}{\boxed{\text{w}}}$
Keyword: non-Gaussianity
Keyword: curvatons
Keyword: density perturbations
Keyword: energy potential

NTCIR11-Math2–8

Formula Query: $\boxed{\text{x}} \leq \frac{6}{2\boxed{\text{n}}} + 12\epsilon$
Keyword: invariant subspace property
Keyword: Banach spaces

NTCIR11-Math2–9

Formula Query: $\boxed{\text{x}}\frac{\boxed{\text{i}}}{\boxed{\text{n}}} = (1-\epsilon)\boxed{\text{f}} + \frac{\epsilon}{2}[\boxed{\text{g}} + \boxed{\text{h}}]$
Keyword: ecosystems
Keyword: power law distributions

NTCIR11-Math2–10

Formula Query: $f(\boxed{\text{x}}) = \frac{1}{\sigma\sqrt{2\pi}}\boxed{\text{z}}$
Keyword: gaussian distribution
Keyword: random sequence
Keyword: algorithm
Keyword: code

NTCIR11-Math2–11

Formula Query: $p^2 + x^2(ix)^\epsilon$
Keyword: eigenvalue

NTCIR11-Math2–12

Formula Query: L_∞
Keyword: construct
Keyword: differential graded algebra

NTCIR11-Math2–13

Formula Query: (D)
Keyword: type
Keyword: maximal monotone

NTCIR11-Math2–14

Formula Query: $-tr(\boxed{\text{x}}ln\boxed{\text{x}})$
Keyword: neumann
Keyword: entropy

NTCIR11-Math2–15

Formula Query: $\frac{1}{n^{\boxed{\text{s}}}}$
Keyword: Riemann
Keyword: zeta

NTCIR11-Math2–16

Formula Query: $\boxed{\text{f}}(\boxed{\text{x}}) = \boxed{\text{x}}$
Keyword: fixed point

NTCIR11-Math2–17

Formula Query: $\boxed{\text{f}}(\boxed{\text{z}}) = \boxed{\text{z}}^{\boxed{\text{d}}} + c$
Keyword: Mandelbrot
Keyword: dynamical plane

NTCIR11-Math2–18

Formula Query: $\frac{a\boxed{\text{z}}+b}{c\boxed{\text{z}}+d}$
Keyword: Mobius
Keyword: Möbius
Keyword: automorphism

NTCIR11-Math2–19

Formula Query: $H_{\boxed{\text{n}}-\boxed{\text{k}}}(\boxed{\text{X}})$
Keyword: homology
Keyword: duality

NTCIR11-Math2–20

Formula Query: $\boxed{\text{x}}^2 - \boxed{\text{x}} - 1 = 0$
Keyword: golden ratio
Keyword: Fibonacci

NTCIR11-Math2–21

Formula Query: $\boxed{\mathsf{f}}(\boxed{\mathsf{a}}x + \boxed{\mathsf{b}}y) < \boxed{\mathsf{a}}\boxed{\mathsf{f}}(x) + \boxed{\mathsf{b}}\boxed{\mathsf{f}}(y)$
Keyword: convex
Keyword: convexity

NTCIR11-Math2–22

Formula Query: $\int_{\boxed{\mathsf{M}}} \boxed{\mathsf{f}} dS$
Keyword: integral
Keyword: surface

NTCIR11-Math2–23

Formula Query: $\langle \cdot, \cdot \rangle$
Keyword: definition
Keyword: inner
Keyword: product

NTCIR11-Math2–24

Formula Query: $\widehat{\mathrm{CH}}^{\boxed{\mathsf{p}}}(\boxed{\mathsf{A}}) \cong \boxed{\mathsf{Y}}$
Keyword: arithmetic
Keyword: Chow
Keyword: group

NTCIR11-Math2–25

Formula Query: $\widehat{\deg}(\boxed{\mathsf{x}}_1^{\boxed{\mathsf{k}}_1} \boxed{\mathsf{x}}_2^{\boxed{\mathsf{k}}_2} \cdots \boxed{\mathsf{x}}_n^{\boxed{\mathsf{k}}_n})$
Keyword: theorem
Keyword: arithmetic
Keyword: Chern
Keyword: number

NTCIR11-Math2–26

Formula Query: $det(\boxed{\mathsf{a}}_1\boxed{\mathsf{b}}_2 - \boxed{\mathsf{a}}_2\boxed{\mathsf{b}}_1 + \boxed{\mathsf{c}})$
Keyword: vessel

NTCIR11-Math2–27

Formula Query: $E(\lambda) = -m^2_{\mathrm{dyn}}(\lambda)$
Keyword: Electron Energy
Keyword: Quantum
Keyword: Dynamics
Keyword: NJL

NTCIR11-Math2–28

Formula Query: Φ^4
Keyword: Quantum
Keyword: Field
Keyword: Theory

NTCIR11-Math2–29

Formula Query: $\sum_{\boxed{\mathsf{n}}=0}^{\infty} t^{\boxed{\mathsf{m}}} a_k(x)$
Keyword: Heat
Keyword: Kernel
Keyword: Asymptotic

NTCIR11-Math2–30

Formula Query: $\mathbb{C}P^{\boxed{\mathsf{n}}}$
Keyword: Complex
Keyword: Projective
Keyword: Space

NTCIR11-Math2–31

Formula Query: $\boxed{\mathsf{k}} + 1/(3\boxed{\mathsf{k}} + \boxed{\mathsf{c}})$
Keyword: Graph
Keyword: Covering
Keyword: Fractional Arboricity

NTCIR11-Math2–32

Formula Query: $|\boxed{\mathsf{u}} \cdot \boxed{\mathsf{v}}| \leq ||\boxed{\mathsf{u}}||||\boxed{\mathsf{v}}||$
Keyword: Cauchy
Keyword: Schwarz

NTCIR11-Math2–33

Formula Query: $||\boxed{\mathsf{f}}\boxed{\mathsf{g}}||_1 \leq ||\boxed{\mathsf{f}}||_p||\boxed{\mathsf{g}}||_q$
Keyword: Hoelder
Keyword: Hölder

NTCIR11-Math2–34

Formula Query: $\lim_{n\to\infty} \int_{\boxed{\mathsf{X}}} \boxed{\mathsf{f}}_n d\boxed{\mathsf{u}} = \int_{\boxed{\mathsf{X}}} \lim_{n\to\infty} \boxed{\mathsf{f}}_n d\boxed{\mathsf{u}}$
Keyword: dominated convergence
Keyword: Lebesgue

NTCIR11-Math2–35

Formula Query: $||\boxed{\mathsf{x}} - \boxed{\mathsf{a}}|| \leq \frac{1}{||\boxed{\mathsf{a}}^{-1}||}$

Keyword: invertible
Keyword: Banach algebra

NTCIR11-Math2–36

Formula Query: $\rho(\boxed{\mathsf{A}}) = \lim_{n\to\infty} ||\boxed{\mathsf{A}}^{n}||^{1/n}$

Keyword: spectral radius
Keyword: matrix

NTCIR11-Math2–37

Formula Query: $\boxed{\mathsf{A}} = \boxed{\mathsf{U}}\boxed{\mathsf{S}}\boxed{\mathsf{V}}^{T}$

Keyword: singular value decomposition
Keyword: matrix

NTCIR11-Math2–38

Formula Query: $||\boxed{\mathsf{x}} + \boxed{\mathsf{y}}||_{\boxed{\mathsf{p}}} \leq ||\boxed{\mathsf{x}}||_{\boxed{\mathsf{p}}} + ||\boxed{\mathsf{y}}||_{\boxed{\mathsf{p}}}$

Keyword: minkowski
Keyword: inequality

NTCIR11-Math2–39

Formula Query: $\mathbb{P}[\boxed{\mathsf{X}} \geq \boxed{\mathsf{t}}] \leq \frac{\mathbf{E}[\boxed{\mathsf{X}}]}{\boxed{\mathsf{t}}}$

Keyword: Markov inequality

NTCIR11-Math2–40

Formula Query: $\lim_{n\to\infty} \mathbb{P}[|\boxed{\mathsf{A}}_{n} - \mathbf{E}[\boxed{\mathsf{X}}]| > \boxed{\mathsf{e}}] = 0$

Keyword: weak law
Keyword: large number

NTCIR11-Math2–41

Formula Query: $\mathbb{P}[\lim_{n\to\infty} \boxed{\mathsf{A}}_{n} = \mathbf{E}[\boxed{\mathsf{X}}]] = 1$

Keyword: strong law
Keyword: large number

NTCIR11-Math2–42

Formula Query: $\boxed{\mathsf{E}} = \bigoplus_{\boxed{\mathsf{i}}=0}^{\infty} \boxed{\mathsf{E}}_{\boxed{\mathsf{i}}}$
Keyword: eigenvalues

NTCIR11-Math2–43

Formula Query: $\oint_C \mathbf{B} \cdot \mathrm{d}\ell = \mu_0 I$
Keyword: Ampere
Keyword: line integral

NTCIR11-Math2–44

Formula Query: $\boxed{\mathsf{x}}^{\boxed{\mathsf{n}}} + \boxed{\mathsf{y}}^{\boxed{\mathsf{n}}} = \boxed{\mathsf{z}}^{\boxed{\mathsf{n}}}$
Formula Query: $\boxed{\mathsf{x}}, \boxed{\mathsf{y}}, \boxed{\mathsf{z}}, \boxed{\mathsf{n}} \in \mathbb{N}$
Keyword: Diophantine equations

NTCIR11-Math2–45

Formula Query: $\frac{1+\sqrt{5}}{2}^n$
Keyword: fibonacci

NTCIR11-Math2–46

Formula Query: $1024k^10 - 2560k^9 + 3840k^8 - 4480k^7 + 4096k^6 - 2944k^5 + 1696k^4 - 760k^3 + 236k^2 - 40k$
Keyword: graph
Keyword: chromatic polynomials

NTCIR11-Math2–47

Formula Query: $P_n = 2P_{n-1} + P_{n-2}$
Keyword: recurrence relation
Keyword: Pell number

NTCIR11-Math2–48

Formula Query: $\dot{x}(t) = \boxed{\mathsf{A}} x(t) + \boxed{\mathsf{B}} u(t)$
Formula Query: $t \in \mathbb{R}$
Formula Query: $x(t) \in \mathbb{R}^{\boxed{\mathsf{n}}}$
Formula Query: $u(t) \in \mathbb{R}^{\boxed{\mathsf{m}}}$
Keyword: pole placement
Keyword: state feedback
Keyword: eigenstructure assigment

NTCIR11-Math2–49

Formula Query: $\sum_{\boxed{\mathsf{n}}=1}^{2*\boxed{\mathsf{k}}-1}(-1)^{\boxed{\mathsf{n}}} * cos(1/4 * \pi) * \boxed{\mathsf{n}}^{2/\boxed{\mathsf{k}}} = \boxed{\mathsf{R}}$
Keyword: Gauss sums
Keyword: finite sums

NTCIR11-Math2–50

Formula Query: $\chi'_a(\boxed{\mathsf{G}}) \leq \Delta(\boxed{\mathsf{G}}) + 6$
Keyword: acyclic index
Keyword: acyclic edge coloring
Keyword: graph