

## **IB Mathematical Studies Titles For Projects**

1. An Investigation of People's Knowledge of Art in Relation to Their Age
2. Multi-Functional Calculator
3. Price-Customer Comparison Between Albert Heihn and C1000
4. Winning With Only Twenty-Five Numbers Drawn
5. Network Analysis
6. Growing Rhombuses
7. C.B.S. Equity Index
8. Investigation Into Letter and Point Distribution in Scrabble
9. Mathematics in Card Games
10. Firefighting
11. Comparison of Two Driving Schools
12. Population Growth
13. Lung Capacity
14. Billiards
15. Pascal's Triangle
16. Fractals
17. The Growth of Children Today
18. Cryptography
19. A Comparison Between Two Different Collections of 'Magic the Gathering' Cards
20. Railway Layouts
21. A Comparison of the Agricultural Economy of a Developed and a Developing Country
22. Excessive Use of Plastic/Paper in Candy Bags
23. Is It Possible to Determine an Author Mathematically Analysing His or Her Texts?
24. The Dilemma of Phone Numbers
25. Building a Pyramid
26. Patterns of the Graph of  $y = ax^4 + bx^3 + cx^2 + dx + e$
27. Increasing Traffic Flow
28. Limits on Infinity: Examining Answers to Theroy
29. A Model Investment
30. The Utilization of Mathematical Techniques in the Attainment of Accurate Military Calculations
31. Accommodating Comfort for the Majority of Viewers in a Movie Theater
32. How Seating Effects Grades in the Classroom
33. The Use of Tessellations and Other Mathematical Concepts in the Works of M. C. Escher
34. Tidal Predictions
35. A Wave of Music
36. The Perception of Weight
37. The Resilience of the Baseball and Its Effects on Home Run Production
38. Skateboarding – There's Math in There
39. Is There a Relationship Between the Length of a Turbine Blade and Voltage?
40. Fibonacci Ratios in Sea Shells and in Aesthetics
41. Determining the Correlation Between Economic Class and the Social Behavior of Adolescents
42. Football Statistics
43. A Study of What is Mathematically Beautiful in Musical Melodies
44. Pressure Points on Dancers' Feet
45. The Golden Rectangle in Art
46. Trigonometric Reconstruction of a Walkway

47. Probability of Similar Birthdays
48. Polynomial Functions and Their Graphs
49. Mathematics and Arrest Rates
50. Locating A Hidden Treasure Using Bearings
51. Great Circle Distance and the Airplane
52. Fact or Myth: Comparison of Shoe Size to Forearm Length and Height to Arm Span
53. The Effect of Weight, Friction, and Aerodynamics on the Velocity of a Toy Car
54. Relationship Between Maternal Age and Incidences of Down Syndrome
55. LOGO Computer Graphics
56. The Mathematics in a Zoo
57. Minimisation of costs with different types of letters in a press
58. An investigation into the twin primes problem
59. Consecutive prime powers
60. A study of prime numbers
61. Rational polynomial functions
62. The Pythagorean Triples
63. Properties of the Pythagorean Triples where the legs differ by one
64. Use of logarithmic scales in graphs
65. Fibonacci Sequence
66. Modulo Arithmetic
67. Goldbach's conjecture
68. Different number systems
69. Napier's rods
70. Euclid's theorems
71. Triangle theorems
72. What is the minimum number of circle theorems needed for the University Entrance Exam
73. Computation in other systems than decimal
74. Strategies for arithmetic when using Roman numerals
75. Finding a square root in binary
76. Writing a computer program to convert decimal to binary
77. The superbola  $x^x$
78. The Golden Section
79. Pascal's Pyramid
80. The uses of polar coordinates
81. Ceva's theorem - Its uses and extensions
82. Graphing trigonometrical functions on rectangular and polar axes
83. How to lie with Statistics
84. Determination of  $\pi$  by probability
85. Construction of a Klein bottle
86. Mobius bands
87. The Königsberg Problem
88. Euler's Formula - Examples, Illustrations and Uses
89. Mathematical transformations in mosaics
90. Chinese whispers
91. Mathematics in music and sound
92. The abacus versus the calculator
93. The Calendar.
94. Dates of Easter
95. Geometry by paper folding
96. Possible finishes in darts games