

## POSSIBLE PROJECT TOPICS

2.4 Modular arithmetic

2.5 Cryptography

3.4 Power sets (infinities)

3.5 Geometry of the infinite

4.1 Proofs of the Pythagorean Theorem

4.2 The Art Gallery Theorem

4.3 Golden Rectangle

4.4 Tiling

4.6 Non-Euclidean Geometry

4.7 The Fourth Dimension

5.1 Topology

5.2 Mobius Band

5.4 Knots

5.5 Fixed Points

6.3-6.4 Fractals

7.2 Probability

7.3 Coincidence

7.4 Counting

7.5 Statistics

7.5 Data Analysis

8.1 Expected Value and Newcomb's Paradox

8.2 Risk

8.3 Compound Interest (mortgage, loans, savings)

8.4 Voting Schemes

8.5 Fair Division Algorithms