

The Math News

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some objects by others so long as the relations remain unchanged. Content to them is irrelevant: they are interested in form only." Henri Poincaré

The most basic mathematical tools needed for computer graphics are vectors and matrices. Math majors encounter these important ideas in **SM261, Matrix Theory**, the first required course in the major. **SM365, Introduction to Scientific Computing**, addresses many of the computational issues involved, and the mathematics that lies behind them.

Recent and coming events:

Math Club **careers night** Tuesday, February 19. Mathematicians from the civilian and military communities talk about career opportunities for mathematics majors.

Math Majors' Ice Cream Social

Upperclass mathematics majors are eager to answer plebes' questions about the major. They'll gather in and near the MathLab (**Chauvenet 103**) between 1900 and 2000 on Thursday, February 28. Anyone with a little curiosity about the mathematics major and a taste for ice cream is welcome.

Quick quotation: "Mathematicians do not study objects, but relations between objects. Thus, they are free to replace

Plebe Team Wins Math Jeopardy! Contest

Tuesday's Math Club meeting was devoted to a (mostly) mathematical version of Jeopardy! Teams representing each class of midshipmen competed. The **Class of 2005** emerged victorious. Team members were **Jennifer Wall (14 co)**, **Pat Daly (16 co)**, and a **mystery plebe** named Chris recruited from the audience.

Quick problem: If you multiply out $(x+y-z)^{50}$ and then add up all the coefficients of the powers of x , y , and z that appear, what sum should you get?

Last issue's problem:

A small circle lies inside a circle of radius 1, tangent to that circle and also tangent to (but outside) an equilateral triangle whose vertices are on the large circle. What's the radius?

The largest circle that fits between the triangle and the circle has radius $\frac{1}{4}$, half the difference between the radius of the large circle and the

distance from the center of that circle to one side of the equilateral triangle. Any smaller circle will also fit.

Mathematics and Oceanography are the only majors in the Math/Science Division with honors programs.

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<http://www.usna.edu/MathDept/website/index.htm>