

## Rockhurst University Mathematics Problem of the Month

Congratulations to John Paul Armilio and Josh Hilliard, winners of October's contest. Each wins a prize from the POM collection. Honorable mention goes to Peter Huhnerkoch, Bryan DeLeve, Br. Glenn Kerfoot, Andrew Silver, Peter Simone, and Fr. Kinerk. (By the way, the answer to the dice stacking question is 7,962,624.) The contest is open to any currently enrolled Rockhurst student. The winner will be chosen according to who has the best solution (not just answer) to the problem. Ties will be resolved by considering the order in which the solutions were received.

Solutions should be submitted to Keith Brandt (Richardson 120) by the end of the month. The winners will receive wonderful prizes, so give these problems some thought!

### Problems For November 2004:

1. At Wrigley Field in Chicago, it is exactly 400 feet from home plate to the wall in dead center field. How far is it from the wall in dead center field to third base?  
Hint: In professional baseball, the distance between the bases is 90 feet.
2. Suppose  $h < b$ . A rectangle  $R$  with base  $b$  and height  $h$  has the following property: If we remove an  $h \times h$  square, the rectangle that remains is similar to  $R$ . Find the ratio  $b/h$ .