

## Rockhurst University Mathematics Problem of the Month

Congratulations to Matt Detrick and Ryan Powderly, winners of March's contest. Each wins a prize from the POM puzzle collection. Honorable mention goes to Br. Glenn Kerfoot and Peter Simone. 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. Winners receive wonderful prizes, so give these problems some thought!

### Problems For April 2006:

1. Start with an equilateral triangle (all 3 sides have the same length). Now pick any point in the interior of the triangle. Draw perpendicular lines from this point to each of the 3 sides of the triangle. Find a relationship between the sum of the lengths of these 3 perpendiculars and the length of a side of the triangle.
2. A patio is surrounded by a wall with uniform thickness. If the outer dimensions (including the wall) are 12 ft. by 15 ft, and the area inside the wall is  $88 \text{ ft.}^2$ , find the thickness of the wall.