

Rockhurst University Mathematics Problem of the Month

Congratulations to Jonathon Vandergriff-Hughes, winner of February's contest. Honorary mention goes to Peter Simone and Prof. Nancy Donaldson. 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 March 2005:

1. Find a formula for $\sum j \cdot k$, where the sum is over all j and k in $\{1, 2, \dots, n\}$ such that $j \neq k$.
2. A passenger on the front of train A observes that he passes the complete length of train B in 33 seconds when traveling in the same direction as B and in 3 seconds when traveling in the opposite direction. If B is 330 feet long, find the speeds of the two trains.