

The Problem Solving Competition - Problem #4

- Your submission should contain a FULL solution. Not just the answer, but your entire argument.
- **Submit solutions to Pam in MCT 250**
- **Questions???** Ask Dr. Taylor email: pttaylor@ship.edu, or stop by MCT 281
- Winners, problems and solutions will be posted at <http://www.ship.edu/pttaylor/PSC/index.html>

A common algebra mistake take the form $(a + b)^2 = a^2 + b^2$.

For example, claiming $(2 + 3)^2 = 2^2 + 3^2$ is clearly a mistake.

Note, however, that $(2 + 3)^2 = (2 + 1)^2 + (3 + 1)^2$.

Determine all values for m and n such that $(m + n)^2 = (m + 1)^2 + (n + 1)^2$ where m and n are positive integers.

Solutions for this puzzle will be due **Wed, Oct 28** at 4pm.