Problem of the Week
Problem C
That's Odd

$$1 = 1^2$$

$$1 + 3 = 4 = 2^2$$

$$1 + 3 + 5 = 9 = 3^2$$

$$1 + 3 + 5 + 7 = 16 = 4^2$$

Did you know that the sum of the first n positive odd integers is n^2? The diagram above illustrates the first four possible sums. The sum of the first five positive odd integers would be 5^2 or 25. We can easily check to see that $1 + 3 + 5 + 7 + 9 = 25$.

When adding the first a positive odd integers to the first b positive odd integers, the sum is 180. If p is the largest odd number in the first set of numbers and q is the largest odd number in the second set of numbers, then determine the sum $p + q$.