

Patterns

John T. Baldwin

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If you want to improve the grade on your assignment you must redo the work correcting the difficulty and answer the two questions posed below. Make-up assignments must be turned in one week after the graded work is returned (usually 2 weeks after the assignment is originally due. This will tighten up at the end of the semester.)

Rubric:

1. Problems 1a and 1b were worth one point each. Credit was given to a student had a convincing misreading of the problem.

Problem 1C: (2 points) The crucial issue was to say that some kind of argument was necessary to claim the formula for all n . No credit was given for checking an example.

Problem 1D: Full credit (3 points) for an inductive proof of the formula for sum of the squares and for a clear argument somewhere in problem 1, that this formula actually applied to the checkerboard question. 2 points for an inductive proof of the formula for sum of squares without the connection to the problem asked.

2. Problem 2A: 1 point for correctly understanding that the answer depended on exactly where the n -points are placed on the circle. No points for confusions about infinitely many points.

Problem 2B: 2 points for explaining how the maximum depended on whether three of the chords intersected in a single point.

Problem 2C. Three points for recognizing that the formula 2^{n-1} stops working and for looking up the formula $nC_2 + nC_4 + 1$.

Problem 2D. 3 points if the proof made clear how counting lines and intersections translated into counting regions. Otherwise, only 2.

Problems 3A and 3B were each worth 2 points. Generally speaking, full credit was given if the well-posed problem was well-posed and if you had any plausible complaint against the one that was not well-posed.