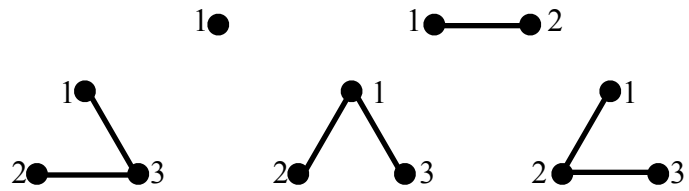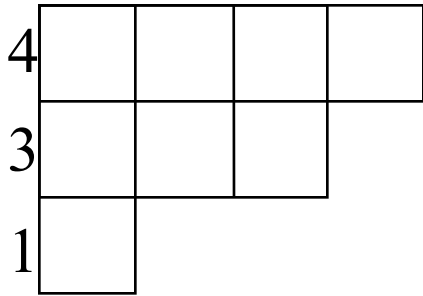*Math you can count on!*   *Spring 2012*

COMBINATORICS
Math 4370 (Section #26654)
TueThu 10:30-11:50

$$\sum_{n \geq 0}(n+1)x^n = 1 + 2x + 3x^2 + \cdots = \frac{1}{(1-x)^2} = \left(\sum_{n \geq 0} x^n\right) \times \left(\sum_{n \geq 0} x^n\right)$$

Combinatorics is the study of counting things. Perhaps in other classes, such as Discrete Math or Probability, you've seen some examples of this, such as counting permutations or combinations. Here, we will go much further, and look at more elaborate or sophisticated structures. We will also apply more rigor than in Discrete Math, as you will need to prove some things, not just compute them. There is no prerequisite, but there will be some proofs, so some experience with proofs is helpful, though not required.

Format:
Classes will be interactive, and feature a mix of lecture, discussion, and problem solving. Class activities will be structured around "reading in advance" assignments, with Reading Questions specifically written to help you comprehend the textbook. Grades will be based on these Reading Questions, and also on class participation, weekly written homeworks, about two in-class exams, and a comprehensive final exam.

Questions? Dr. Art Duval
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