

want to prove that one Hamiltonian circuit implies at least 3 in a trivalent graph? He does it by a piece of algebra. Does he want a condition for a graph to have a perfect matching? (See Chapter 5.) He extracts it from an identity involving Pfaffians. Does he want to enumerate planar maps of some kind? He solves functional equations for formal power series. And it is not just a matter of one worker's inclinations. Look at the towering structure of general graphical enumeration theory! It is built of permutation groups and their cycle indices, and its pinnacles are formal power series [6].

So at times I gaze into the Future and contemplate a Mathematics in which there is no Graph Theory. That has been absorbed into Linear Algebra [5], or perhaps the Theory of Formal Power Series. But this mood does not last, since I am naturally optimistic. My vision usually ends with a glorious resurrection in the form of Matroid Theory.

I like matroids. I think of them as combinatorial objects of the same general kind as graphs, – generalizations of graphs in fact, – and even more desirable because they always have duals. It is true that I am not yet very good at drawing them, and if I thereby stand convicted of the feminine weakness of illogicality, then so be it. Matroid Theory brings with it out of the sea of Algebra “the abstract properties of linear dependence” and we discover paradoxically that fundamentally linear dependence is not an algebraic concept at all, even if it is at times decorated with fields and rings.

But I am getting ahead of my subject. Matroids are not discussed in Bondy and Murty. Still, we can always hope for a sequel, or an expanded Second Edition.

Meanwhile the present work gives us Graph Theory in its state of purity. It is really an outstanding book. Why, Appendix III alone (Some Interesting Graphs) is worth “a thousand pounds a puff”.

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Asymptotic wave theory, by Maurice Roseau, Applied Mathematics and Mechanics, vol. 20, North Holland/American Elsevier, Amsterdam/New York, 1976, x + 349 pp.

The beauty of wave motion has long fascinated mankind even though he may not always have been aware that he was observing waves in action. The