

9.3: The Mean-Field Approximation

Many times, in this book, I have had occasion to make an approximation, but then I argued (sometimes rigorously and sometimes less rigorously) that this approximation would become “exact in the thermodynamic limit.” So let me emphasize that the mean-field approximation is *not* exact in the thermodynamic limit. It is usually accurate at high temperatures. It is rarely accurate near phase transitions.

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