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The occurrence of periods of mixed Tate motives as values of residues of Feynman graphs in perturbative quantum field theory became the object of extensive studies in recent years, centered around the motivic properties of the graph hypersurfaces, which arise naturally in the parametric formulation of Feynman integrals. We showed that a partial form of deletion-contraction relation holds for the classes of these graph hypersurfaces in the Grothendieck ring of varieties. We now argue that the same techniques can be applied to another class of hypersurfaces, associated to Potts models in statistical mechanics, and the resulting deletion-contraction formulae lead to a motivic approach to the problem of phase transitions. (Received September 21, 2010)