Scaling relations for logarithmic corrections

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Multiplicative logarithmic corrections frequently characterize critical behaviour in statistical physics. Here it is shown that the various exponents of such corrections are interrelated just as the exponents characterizing leading scaling behaviour are. A new set of scaling relations for these logarithmic-correction exponents is proposed. These relations are then confronted with results from the literature and new predictions for logarithmic corrections in certain models are made.

[1] R. Kenna, D.A. Johnston and W. Janke, Phys. Rev. Lett. 96 (2006) 115701.
[2] R. Kenna, D.A. Johnston and W, Janke, Phys. Rev. Lett. 97 (2006) 155702.