

1 Results

1.1 2×2 lattice, analytical expressions

If we scale the value of β from $1/k_B T$ to $1/J$ (Scaling factor $k_B T/J$) in the analytical expression from section ??, we will get a good benchmark for computer computations to come. These values are listed in table 1 below.

Mean energy, $\langle E \rangle$:	$-7.9839J$
Mean absolute magnetization, $\langle \mathcal{M} \rangle$:	3.9893
Specific heat capacity, C_V :	0.0165
Susceptibility, χ :	0.0160

Table 1: Material characteristics benchmark for a 2×2 lattice
No. of MC-cycles before reaching good results: