



Figure 54. Three function composition (f, g, and h) representing proxy single best answer responses via lossy data compression for item 2 with correct answer (a, b, c) when binary and ternary scored. R = Response, L = Letter, B = Binary and T = Ternary.

Figure 54 displays the composition of three functions, f, g and h, starting from proxy single best answer (SBA) responses to item 2 with the correct answer (a, b, c). Lossy data compression, that is, with some loss of information when data is compressed and reconstructed, is applied to the responses which are represented by a three way scoring guide using letter (L), binary (B), and ternary (T) scales. These three scoring guide scales represent possible lossy data compression transformations to the dataset so that it can be used in a Winsteps software control file.

Data compression of ordered triple rank (OTR) responses from the first six people in the dataset is examined more closely in order to clearly illustrate the data transformation