Acceptance probability

Where Q is the jump distribution

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For the situation where we sum a constant X, we have:

We use a truncated normal proposal distribution, where the lower truncation point is given by . This avoids having the second break being smaller than the first, which is set to zero. Therefore, we have that:

Because is symmetric around zero, then . Therefore,

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For the situation in which we multiply by a positive constant X, we have:

Because we have a truncated normal proposal distribution, this is equal to: