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Oksana Guba* (oksana@unm.edu), Department of Math, MSC03 2150, 1 University of New Mexico, Albuquerque, NM 87131. *Green's Functions on Large and Unbounded Intervals*. Preliminary report.

Many spectral problems are naturally posed on the infinite line. As an example, consider the linear operator $Lu = a(x)u'' + b(x)u' + c(x)u$ and the spectral problem $Lu = su$. We assume that the spectral parameter s is in the resolvent of the operator L or its eigenvalue. For numerical purposes one typically restricts the problem to a finite interval introducing a boundary operator. We study the properties of Green's functions of all-line and bounded interval problems for different boundary operators. (Received July 10, 2007)