ON THE CONVERGENCE OF INFINITE PRODUCTS OF $2 \times 2$ MATRICES

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For years, humanity has found ever-improving ways to evaluate irrational numbers with arbitrary numerical precision. The most famous example is of course $\pi$, of which by now over twelve trillion digits are known. Almost every time this record was broken, it was done by evaluating another convergent sequence. The method we will use to evaluate irrational numbers will be able to evaluate an infinite, countable but unknown subset of the irrational numbers. We will not focus on the convergence speed of this method, but we will give a few specific solutions for some ‘special’ numbers, a few general solutions for different sub-problems and give possible methods to find more general solutions.