This thesis studies the volume of the unit ball of finite-dimensional Lorentz sequence spaces $\ell_n^{p,q}$. Lorentz spaces are a generalisation of Lebesgue spaces with a quasinorm described by two parameters $0 < p, q \leq \infty$. The volume of the unit ball $\mathbf{B}_n^{p,q}$ of a general finite-dimensional Lorentz space was so far an unknown quantity, even though for the Lebesgue spaces it has been well-known for many years. We present the explicit formula for $\mathrm{Vol}(\mathbf{B}_n^{p,\infty})$ and $\mathrm{Vol}(\mathbf{B}_n^{p,1})$. We also describe the asymptotic behaviour of the n-th root of $\mathrm{Vol}(\mathbf{B}_n^{p,q})$ with respect to the dimension n and show that $[\mathrm{Vol}(\mathbf{B}_n^{p,q})]^{1/n} \approx n^{-1/p}$ for all $0 < p < \infty$, $0 < q \leq \infty$. Furthermore, we study the ratio of $\mathrm{Vol}(\mathbf{B}_n^{p,\infty})$ and $\mathrm{Vol}(\mathbf{B}_n^{p})$. We conclude by examining the decay of entropy numbers of embeddings of the Lorentz spaces.