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**Anna H Kamińska\*** ([kaminska@memphis.edu](mailto:kaminska@memphis.edu)), The University of Memphis, Department of Math. Sciences, Memphis, TN 38152. *Convexity, concavity, type and cotype of Lorentz spaces.*

Given  $0 < p < \infty$ , the Lorentz space  $\Lambda_{p,w}$  is a subspace of the set of Lebesgue measurable functions  $f : I \rightarrow \mathbb{R}$  with  $I = (0, 1)$  or  $I = (0, \infty)$ , such that

$$\|f\|_{p,w} := \left( \int_I f^{*p} w \right)^{1/p} < \infty,$$

where  $f^*$  is a decreasing rearrangement of  $f$ , and  $w > 0$  is a weight function. We show that  $\Lambda_{p,w}$  contains an order isomorphic copy of  $\ell^p$ . We also provide criteria for lattice convexity and concavity of  $\Lambda_{p,w}$  in terms of  $W(t) = \int_0^t w$ , and in the case when  $\Lambda_{p,w}$  is normable, for its type and cotype as well. (Received October 03, 2000)