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An oriented hypergraph is a hypergraph where every vertex-edge incidence is given a label of $+1$ or -1 . With this labelling, the notion of a signed adjacency allows one to study the adjacency and Laplacian matrices associated to this hypergraph. It turns out that the problem of finding Hadamard matrices is equivalent to finding a special family of oriented hypergraphs. This gives rise to a condition on a collection of signed complete graphs which can be used to find Hadamard matrices. (Received September 22, 2015)