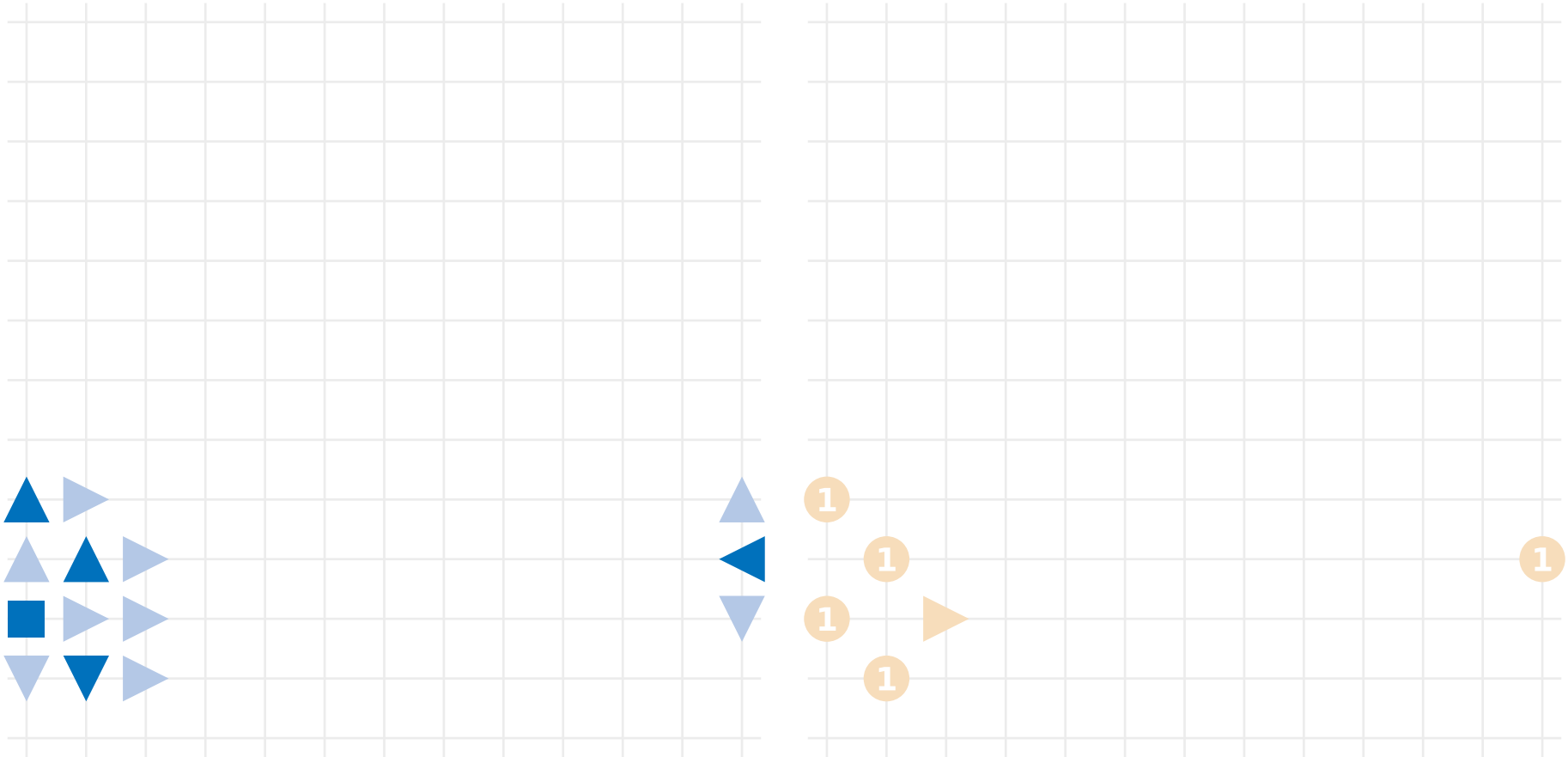iter. 47.5