A uniform solid cube of edge 2a is sliding with velocity v on a smooth

horizontal table when its leading edge is suddenly brought to rest by

a small ridge on the table. Which dynamical variables are conserved

(a) before impact, (b) during impact, and (c) after impact? Find the

angular velocity immediately after impact, and the fractional loss of

kinetic energy. Determine the minimum value of v for which the cube

topples over rather than falling back.

answer: 