

# ROTATIONAL EQUILIBRIUM

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& New York Times, December 23, 2016 by William Grimes. Dedicated to my New York Architect Niece Margot Otten.

## *Kenneth Snelson, Sculptor Who Fused Art, Science and Engineering, Dies at 89*



**INTRODUCTION:** The beam below is in static & rotational equilibrium.

**QUESTIONS:** (a) Find: H, T, & V using :  $\Sigma F_x = 0$  ,  $\Sigma F_y = 0$  ,  $\Sigma \tau = 0$   
(b) Find R &  $\theta$  ?

**HINTS:** Take axis of rotation at the right end of beam.  $\tan \theta = \text{opp./adj.}$

**ANSWERS:**(a) H = 66.67 lb., V = 50 lb. , T = 83.33 lb., (b) R = 83.33 lb.,  
 $\theta = 37^\circ$

Kenneth Snelson with his sculpture "Soft Landing," which was installed in Denver in 1982. As an art student, he became enchanted by the lectures on geometric forms delivered by Buckminster Fuller. [Kenneth Snelson](#), a sculptor who stitched together aluminum tubes with flexible stainless-steel wires to create seemingly lighter-than-air towers, arcs and cantilevers, died on Thursday at his home in Manhattan. He was 89. Mr. Snelson was a painting student at [Black Mountain College](#) in North Carolina in the late 1940s when he became enchanted by the lectures on geometric forms delivered by a last-minute substitute teacher, R. [Buckminster Fuller](#), the futurist inventor and father of the geodesic dome. In an experiment, "Early X Piece" (1948), Mr. Snelson took two X's made from propeller-shaped pieces of plywood and suspended one over the other using a matrix of nylon tension lines. This was something new, an advance on the kinetic sculptures he had been making. "While forfeiting mobility, I managed to gain something even more exotic: solid elements fixed in space, one-to-another, held together only by tension members," he wrote in a [letter](#) published in the International Journal of Space Structures in 1990. "I was quite amazed at what I had done." The engineering aspect of his work and his interest in the structure of the atom, the basis of a series of sculptures that he called circlespheres, led some critics to regard him as a quasiscientist rather than an artist. Mr. Snelson rejected this interpretation emphatically.



"Mirror, Mirror I" (1999). Credit via Marlborough Gallery, New York

