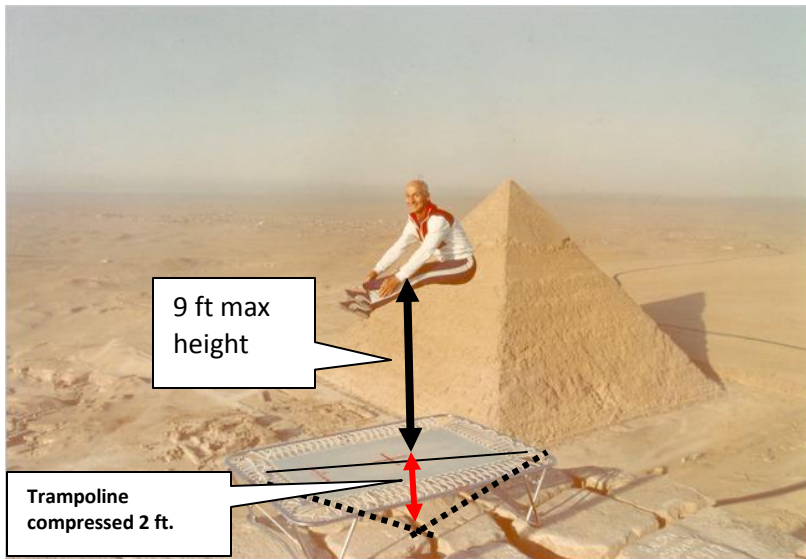


WORK-ENERGY

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Austin, Tx 78701 jpcise@austincc.edu & NYTimes April 13,2010 by Dennis Hevesi . Send me e-mail on how you used this application.Thanks! jc

George Nissen, Father of the Trampoline, Dies at 96



INTRODUCTION: The trampoline would compress 2 ft at the most(see sketch). Nissen(128 lb.) could leap 9 ft maximum off trampoline surface. **QUESTIONS:** (a) Using energy concepts find the speed which he left trampoline surface So as to achieve a maximum height of 9 ft? (b) Using energy concepts find the elastic constant (K)of the trampoline in units of lb/ft? **HINT:** Elastic potential energy = $(1/2)KX^2$, gravitational potential energy = mgh , Kinetic energy = $(1/2)MV^2$. The fully compressed trampoline(2ft) converts elastic PE to gravitational PE and KE at horizontal. **Answers: (a) 24 ft/s, (b) 704 lb/ft**

George Nissen, a father of the trampoline, went airborne at the top of a pyramid in Egypt in 1977.

George Nissen, 16, who was a member of the gymnastics and diving teams at his high school, was soon tinkering in his parents' garage, strapping together a rectangular steel frame and a canvas sheet. Even though **it was not quite as springy** as he had hoped, he called it a **bouncing rig**. That was in 1930. It would be several years later, while a business major at the [University of Iowa](#), that Mr. Nissen and his gymnastics coach, Larry Griswold, would work together to make a more flexible contraption with a nylon sheet. They still called it a bouncing rig. Then, in 1937, Mr. Nissen and two friends formed a traveling acrobatics act called the Three Leonardos and began performing throughout the Midwest and Texas and then in Mexico. It was there that he heard the Spanish word for diving board: **el trampolin**. Mr. Nissen, **who devoted his life to promoting and manufacturing the trampoline** — once renting a kangaroo to bounce with him in Central Park — died Wednesday at a hospital near his home in San Diego. He was 96. His son-in-law Ron Munn confirmed the death. They were right. “He was at those Sydney Olympics in 2000, 86 years old at the time,” Mr. Normile said, “and they actually invited him to bounce on the official trampoline.” Well into his later years, Mr. Nissen remained head over heels for his sport. In 1977, with his son-in-law Ron, **he scaled a pyramid in Egypt — one with a flattened top — set up a trampoline and did some flips.**