

# WORK-ENERGY

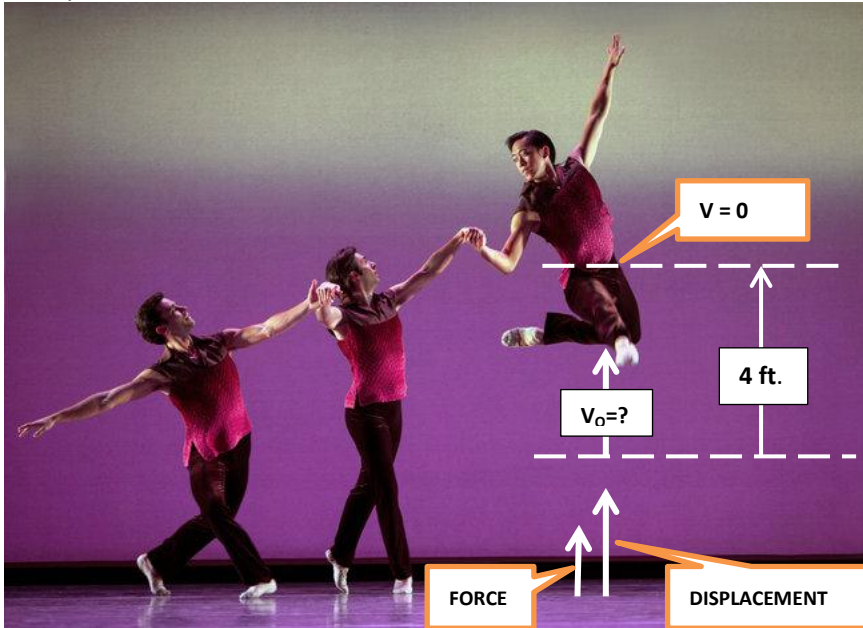
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DANCE REVIEW

## In Seattle, a Pride of Choreographers

SEATTLE — Few ballet companies anywhere can afford the risk of presenting a quadruple bill of world premieres. But [Pacific Northwest Ballet](#), in its 40th-anniversary season, has gone further. A current “All Premiere” program presents not only four new works on the troupe’s main stage, at the Marion Oliver McCaw Hall, but three are by dancers in the company (Andrew Bartee, Margaret Mullin, Kiyon Gaines) and one is by the Seattle-born Mark Morris. There’s cause for local pride.



Pacific Northwest Ballet , with, from left, Jerome Tisserand, Ryan Cardea and William Lin-Yee in Mark Morris’s “Kammermusik No. 3,” part of the company’s “All Premiere” program at Marion Oliver McCaw Hall in Seattle.

**INTRODUCTION:** This 128 lb. dancer leaped 4 ft. into the air.

**QUESTIONS:** (a) Find dancer’s potential energy? (b) How much work did dancer do to reach the 4 ft. height? (c) At what speed did dancer leave the floor in his leap? (d) How much kinetic energy did dancer have leaving floor? (e) Using energy concepts find dancer’s speed as he falls back to the floor? (f) answer (e) using kinematics concepts?

**HINTS:**  $w = mg$  ,  $g = 32 \text{ ft/s}^2$ ,  
 $V^2 = V_0^2 + 2ax$  , energy lost = energy gained

**ANSWERS:** (a) 512 ft. lb., (b) 512 ft. lb.  
(c) 16 ft/s., (d) 512 ft. lb., (e) - 16 ft/s.,  
(f) -16 ft/s.