

MOMENT OF INERTIA

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Review: The Big Apple Circus Is Ripe for Another Bite

By ALEXIS SOLOSKI NOV. 7, 2017

A year ago, the Big Apple shrank a little. Big Apple Circus, which opened in 1977, had amassed more than \$8 million in debt and did not produce a fall show. A crowdfunding campaign sputtered, and the circus filed for [bankruptcy](#). But after a successful auction, [Big Apple Circus](#) has returned to Damrosch Park at Lincoln Center with its, well, core sensibilities intact. Big Apple Circus has switched from nonprofit to for-profit, but on a Saturday this month, the big top looked more or less the same. The souvenir stand had stayed modest; the portable toilets were unimproved. Concessions were of the chips-popcorn-churro variety, though the Dippin' Dots came in a glowing cup, which seemed troubling. There was also a small booth selling beer and wine, where a few of the parents had lined up. At 11 a.m., some people find the circus taxing. Inside were plenty of familiar faces, both in the ring and behind the scenes. Big Apple has retained the director Mark Lonergan, the music director Rob Slowik, the writer and clown Joel Jeske and Barry Lubin, a rubber-faced pro who plays Grandma, a housecoat-clad clown who is ardently and inexplicably beloved. (Well, it's probably more explicable if you like clowns. And flatulence jokes.)



INTRODUCTION: As mass moves further from the axis of rotation the moment of inertia increases for an object. In the case of a long rod as used in high wire acts (as at left by Wallendas) the moment of inertia is $\frac{1}{12} m L^2$. L is total length of rod. In this case $L = 15$ ft. and $m = W/g = 16 \text{ lb.} / [32 \text{ ft./s.}^2] = \frac{1}{2}$ slugs.

QUESTION: Find total moment of inertia (I) for all seven performers?

ANSWER: $I_{\text{TOTAL}} = 65.6 \text{ slug ft.}^2$

COMMENT: To prevent the performers from rotating off high wire two concepts are in their favor: High I and center of mass of rods are lower than wire where their feet are on.

Stars of the newly revived Big Apple Circus, clockwise from top left: the Fabulous Wallendas; the ringleader Ty McFarlan; Elayne Kramer performing a contortion act; and Jenny Vidbel and her horses. There were starry additions, too, like Ty McFarlan, ringmaster of [the recently shuttered Ringling Brothers and Barnum & Bailey Circus](#), and the [Fabulous Wallendas](#), a death-defying troupe with a name that sounds like that of some bright-plumaged game bird.

Mr. McFarlan gave a bouncy introduction on a set that looked just a little sparklier. Amy Clark's costumes had sparkle, too, though they made a lot of the performers look like the villains in '80s cartoons. The band sounded happy to be home.