CZYTAMY PO ANGIELSKU

Physics Challenges for Teachers and Students

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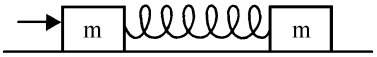
Broken Record
N elastic pool balls of the same mass and size are arranged on the table. One ball is colored red; others are white. All balls are initially at rest. The red ball is then hit by a cue. Mysteriously, after several collisions with the white balls, the red ball *stops* at the very point it was originally placed. What is the minimum total number of balls *N* that allows for such a situation?

The Block Schedule
Two blocks of equal masses *m* are connected by a relaxed spring with a force constant k. The blocks rest on a smooth horizontal table. At $t = 0$, the block on the left is given a quick impulse toward the right, and the blocks begin to slide along the table. At what time *t* would the left block first have zero instantaneous velocity?



Dictionary:

elastic pool balls – sprężyste bile
force constant k – stała sprężystosci
instantaneous velocity – prędkość chwilowa

Readers are encouraged to submit their solutions to the physics challenges. The „best" answers will be published in a later issue. Readers are also encouraged to submit their favorite physics challenges, some of which may be published.

Please send correspondence to:
Boris Korsunsky
444 Wellesley St.
Weston, MA 02493-2631
korsunbo@gse.harvard.edu

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