

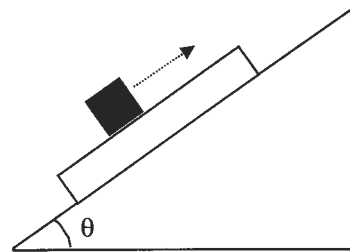
Physics Challenges for Teachers and Students

A Worldwide Problem-Solving Contest



► Another Board Game (J1)

A board of mass m is placed on a frictionless inclined plane that makes an angle θ with the horizontal. A block of mass M is placed on the board and is given a quick push up the board with initial velocity v . Find the distance d covered by the block by the time its velocity drops to $v/2$. The board does *not* move relative to the plane.



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Submission Guidelines:

The deadline for submitting solutions to this problem is Jan. 15, 2005.

- only email submissions will be considered;
- email your solutions to Boris Korsunsky at korsunbo@post.harvard.edu;
- please email the solutions as Word files;
- please email *each solution* as a separate file;
- note that each problem, in addition to a very clever title, has a code such as J1. Please name each file as “problem code-first initial-last name.” For instance, “J1DVader” if your name is Darth Vader and you are sending the solution to problem J1;
- please state your name, hometown, and professional affiliation in each file.

We look forward to your (and your students’) participation.

Please send correspondence to:

Boris Korsunsky
korsunbo@post.harvard.edu

The next Challenge problem will be posted online Jan. 10.