Physics Challenge for Teachers and Students

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◗ Wait a second!

A rock is launched vertically upward. Let d_1 be the distance traveled during the first second of the flight and d_2 the distance traveled during the second second. What is the maximum possible ratio of d_1/d_2? What is the initial speed of the rock that corresponds to that maximum ratio? Neglect the air resistance and assume that the flight lasts longer than two seconds. The acceleration due to gravity is g.

The 2015-2016 season of *Challenges* had a strong finish, with many readers from all over the world submitting the solutions to our March, April, and May problems.

We are pleased to recognize the following contributors:

Wayne R. Anderson (emeritus, Sacramento City College, Sacramento, CA)

Philip Blanco (Grossmont College, El Cajon, CA)

Phil Cahill (The SI Organization, Inc., Rosemont, PA)

David A. Cornell (emeritus, Principia College, Elsah, IL)

Don Easton (Lacombe, Alberta, Canada)

Supriyo Ghosh (Kolkata, India)

John F. Goehl, Jr. (Barry University, Miami Shores, FL)

Fredrick P. Gram (Cuyahoga Community College, Cleveland, OH)

Gerald E. Hite (TAMUG, Galveston, TX)

Charles Holbrow (emeritus, Colgate University, Hamilton, NY)

Art Hovey (Galvanized Jazz Band, Milford, CT)

José Ignacio Íñiguez de la Torre (Universidad de Salamanca, Salamanca, Spain)

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Daniel Schumayer (University of Otago, Dunedin, New Zealand)

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Wu Yonghao (Tian Yi High School, Wuxi, Jiangsu Province, China)

Guidelines for contributors:

– We ask that all solutions, preferably in Word format, be submitted to the dedicated email address *challenges@aapt.org*. Each message will receive an automatic acknowledgment.

– The subject line of each message should be the same as the name of the solution file (see the instructions below).

– The deadline for submitting the solutions is the last day of the corresponding month.

– Each month, a representative selection of the successful solvers' names will be published in print and on the web.

– If your name is—for instance—Hillary Clinton, please name the file "**Clinton16Sept**" (do not include your first initial) when submitting the September 2016 solution.

– If you have a message for the Column Editor, you may contact him at *korsunbo@post.harvard.edu*; however, please do not send your solutions to this address.

Many thanks to all contributors and we hope to hear from many more of you in the future!

Note: as always, we would very much appreciate reader-contributed original *Challenges*.

Boris Korsunsky, Column Editor