



Ponder This

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May 2014

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Ponder This Challenge:

This month's challenge is from Michael Kleber, based on a problem invented by David Wilson.

Every second, a gun shoots a bullet in the same direction at a random constant speed between 0 and 1.

The speeds of the bullets are independent uniform random variables. Each bullet keeps the exact same speed and when two bullets collide, they are both annihilated.

After shooting 20 bullets, what is the probability that eventually all the bullets will be annihilated?

Please supply the answer rounded to the 10th decimal digit.

We will post the names of those who submit a correct, original solution! If you don't want your name posted then please include such a statement in your submission!

We invite visitors to our website to submit an elegant solution. Send your submission to the ponder@il.ibm.com.

If you have any problems you think we might enjoy, please send them in. All replies should be sent to: ponder@il.ibm.com

Challenge: 04/29/2014 @ 01:00 PM EST

Solution: 06/01/2014 @ 01:00 PM EST

List Updated: 04/29/2014 @ 01:00 PM EST

People who answered correctly:

Oleg Vlasii (04/29/2014 08:11 PM EDT)
Leandro Araújo (05/01/2014 07:29 PM EDT)
Arthur Breitman (05/02/2014 04:54 PM EDT)
Rick Kaye (05/02/2014 05:34 PM EDT)
John Tromp (05/03/2014 02:19 AM EDT)
Peter Gerritson (05/03/2014 01:52 PM EDT)
Mark Stuckel (05/04/2014 04:48 PM EDT)
Todd Will (05/05/2014 03:35 PM EDT)
Daniel Bitin (05/06/2014 05:09 PM EDT)
Balakrishnan Varadarajan (05/05/2014 10:25 PM EDT)
Bart De Vylder (05/06/2014 08:28 AM EDT)
Dan Meyer (05/07/2014 04:28 PM EDT)
Michael Rosola (05/07/2014 08:10 PM EDT)
Mathias Schenker (05/08/2014 08:06 AM EDT)
Tim Joseph Clark (05/08/2014 10:59 PM EDT)
Alexandre Gilotte (05/12/2014 09:53 PM EDT)
Levent Ertöz (05/12/2014 10:19 PM EDT)
John Snyder (05/14/2014 04:13 PM EDT)
Michael Slifker (05/14/2014 06:01 PM EDT)
Franciraldo Cavalcante (05/16/2014 11:15 AM EDT)
Brian Bitto (05/17/2014 11:25 AM EDT)
Amir Sarid (05/17/2014 08:11 PM EDT)
Antoine Comeau (05/18/2014 02:34 PM EDT)
Michael D. Moffitt (05/19/2014 10:25 PM EDT)
Stéphane Higuieret (05/22/2014 11:22 AM EDT)
Gilles-Philippe Paillé (05/22/2014 07:02 PM EDT)
Gareth Richards (05/23/2014 08:31 AM EDT)
Cynthia Beauchemin (05/23/2014 10:56 AM EDT)
Joe Clark (05/24/2014 04:43 AM EDT)
Jan Fricke (05/24/2014 07:55 AM EDT)
Olivier Mercier (05/24/2014 03:41 PM EDT)
Dan Stora (05/27/2014 02:23 PM EDT)
Liubing Yu (05/28/2014 02:26 AM EDT)
Phil Benamy (05/29/2014 02:33 PM EDT)
Chris Shannon (05/29/2014 05:05 PM EDT)
Ehud Schreiber (05/31/2014 02:27 PM EDT)
Karl D'Souza (06/01/2014 09:33 PM EDT)

Attention: If your name is posted here and you wish it removed please send email to the ponder@il.ibm.com.