



University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

Published on *University of Colorado* (<http://www.cu.edu>)

[Home](#) > Baseball, hot dogs, apple pie and math

---

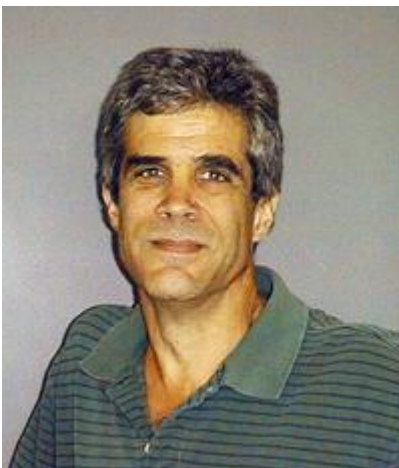
## Baseball, hot dogs, apple pie and math <sup>[1]</sup>

May 20, 2014



by **Tom Hutton** | *CU Colorado Springs*

Calculating a baseball pitcher's earned run average is not college-level math.



But that's OK with [Gene Abrams](#) [2], professor, Department of Mathematics, who uses all things baseball to teach students in grades four through eight that mathematics surrounds them and that the subject is both interesting and fun.

Since 2002, Abrams has been part of Math Youth Days at the Colorado Springs Sky Sox, the AAA minor-league affiliate of the Colorado Rockies of Major League Baseball. There, he combines two passions – baseball and math – with community outreach.

“For me, this has just been fun,” Abrams said recently. “Ok, it's community service. But just getting out to the ballpark and combining two of the things that I really like – it's been entertaining and enjoyable.”

Abrams began working with the Sky Sox on Math Youth Days almost by accident 15 years ago. His daughter, Ellen, now 25, was a schoolmate and friend of the daughter of a Sky Sox executive. A chance conversation between fathers led to an invitation to assist. Abrams accepted and hasn't looked back. This year, an estimated 10,000 youngsters participated.

“The questions they had been using for Math Day were only tangentially related to baseball,” Abrams said. “Things such as – on a recent road trip, the Sky Sox drove the 600 miles from Colorado Springs to Omaha at an average of 60 miles an hour. How long did it take the team to get there???”

“I wanted the questions to really pertain to baseball.”



But beyond thinking of questions to use both in the classroom and at the ballpark on game day, the Sky Sox have pushed Abrams into service into other areas. He has wielded the microphone at home plate to charge up the crowd and to ask on-field questions, sat in the broadcasting booth, and been part of discussions about how to increase participating in Math Youth Days. UCCS now hosts the website where all content for Math Youth Days is posted, <http://www.uccs.edu/pipes/index/sky-sox-math-day.html> [3].

"I quickly learned that nobody at the Sky Sox has just one job," Abrams said. "They were happy to include me. I've learned a lot about how professional baseball really works."

But with roots in education, Abrams is most at home working with elementary and middle school teachers from throughout the Pikes Peak region to create classroom buzz around math and baseball. Teachers can submit ideas and later go online to see questions about baseball prepared by Abrams. Those questions become math lessons in advance of attending a late-morning weekday game. Between innings, questions are posted on the scoreboard and students have the opportunity to solve them, to compete for prizes or to throw the ceremonial first pitch, a privilege often reserved for corporate sponsors. There are three Sky Sox Math Youth Days every spring. Games start at 11:05 a.m. to accommodate school schedules.

"One of my favorite things is to see kids competing to answer math questions," Abrams said. "I love it when a petite fourth-grade girl answers the question and sends the strapping eighth grade boy who thought he knew everything back to his seat. It's a great life lesson about being prepared and doing your homework."

Abrams was raised in Southern California but grew up a Baltimore Orioles fan. He spent Saturday afternoons watching Major League Baseball's "Game of the Week." He remembers watching the telecast credits, seeing the name Alan Roth and his title statistician, and thinking baseball statistician was a dream job. Abrams knew he had no future on the diamond and stopped playing competitively after Little League.

"I throw left and bat right – the worst possible baseball combination," Abrams said. "My playing days were pretty short."

Abrams still enjoys playing for Mudville, a Colorado Springs Park and Recreation men's softball team that he and Jim Daly, professor emeritus, Mathematics, helped found more than 30 years ago.

"It's better described as "slap and giggle" than baseball," Abrams said of Mudville. "But it's still a lot of fun."

Abrams is not compensated for his efforts with the Sky Sox but occasionally gets reminders of their value. After delivering the 2010 convocation address in which he mentioned his work with Sky Sox Math Youth Days, a handful of students stayed afterward and said they'd attended the games many years prior and enjoyed them.

"Did they come to UCCS because they'd gotten to go to a baseball game and learn math?" Abrams said. "Probably not. But it's kind of fun to think about the possibility that the Math Youth Days made some kids aware of college in general and UCCS in particular."

### **Sample Sky Sox Math Youth Day questions**

Q "Last season, my favorite Sky Sox pitcher gave up 90 earned runs in 180 innings pitched.

What was his Earned Run Average last season?

A ?  $(90/180) \times 9 = 4.50$  ERA

Q ? Henry Aaron hit 755 home runs during his major league career. In actually circling the bases during those 755 runs, how many miles did he run? (Give your answer to the nearest mile)

A ? It is 90 feet between baseball bases. A runner would run a minimum of 360 feet on a homerun. The calculation would be  $(360 \times 755)/5280 =$  just over 51 miles.

Q ? A baseball diamond is a square. The distance from each base (or home plate) to the next base (or home plate) is 90 feet. How far is it from home plate to second base?

A- Approximately 127.3 feet (=  $90\sqrt{2}$  feet)

Hear Abrams on AM 1300 during the fourth inning of a recent Sky Sox Math Days

**Promoted to department's home page:**

1

**Intro:**

Gene Abrams uses all things baseball to teach students that math is both interesting and fun.

**Original Story:**

**News Type:**

[News](#) [4]

**Featured News Home Page Image:**

**Images:**

[Students learn math at the Sky Sox baseball games](#) [5]

**Video:**

**Audience:**

[Faculty and Staff](#) [6]

---

**Source URL:** <http://www.cu.edu/news/baseball-hotdogs-apple-pie-and-math>

**Links:**

[1] <http://www.cu.edu/news/baseball-hotdogs-apple-pie-and-math>

[2] <http://www.uccs.edu/~gabrams/>

[3] <http://www.uccs.edu/pipes/index/sky-sox-math-day.html>

[4] <http://www.cu.edu/news-type/news>

[5] <http://www.cu.edu/download/file/fid/5157>

[6] <http://www.cu.edu/faculty-and-staff>