

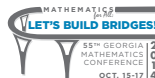
Step Zero: Your Philosophy!  
Step One: Get Students!  
Step Two: Engaging Math!  
Step Three: Contests!  
Step Four: Tournaments!  
Step Five: Paying for it!

# So You've Decided to Start a Math Team... What's the Next Step?

Chuck Garner, Ph.D.

Department of Mathematics  
Rockdale Magnet School for Science and Technology

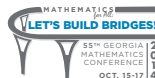
55th Georgia Math Conference, October 16, 2014



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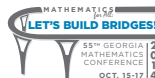
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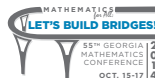


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# Your Philosophy

How do you see your Math Team?

- As a competitive academic team
- As an intramural team
- As a way to introduce kids to math outside the curriculum
- As an honor society

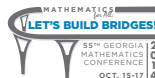


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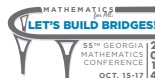
- As a competitive academic team
- As an intramural team
- As a way to introduce kids to math outside the curriculum
- As an honor society
- Some of the above? All of the above?



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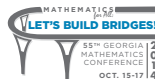
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# Plan!

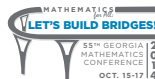
- Pick a meeting day and time that avoids other clubs as much as possible
- Offer at least one meeting each week (more if possible)
- Stick to the schedule!
- Provide snacks!



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# Advertise!

- Cover the building with notices
- Get all math teachers to announce in their classes
- Make it known that everyone is welcome...and make it clear this is not tutoring
- Participate in 9th grade orientation, club day, open house, curriculum night
- “Problem of the Week”

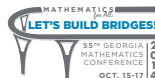




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# Be Welcoming!

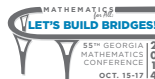
- Have an “intro meeting” so kids can try it out without committing
- Never turn away anyone
- Let kids talk – this isn’t math class!



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## Be a Coach!

- Pair students with appropriate tournaments/contests
- Pair students with appropriate “teachers”
- Don’t ever discourage
- Work the problems the students work as they work them
- Get to know the students!
- Remind students these are *contests*, not *tests*

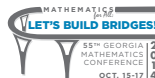


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## Give Rewards and Awards!

- Keep a spreadsheet to record:
  - attendance
  - contest results
  - tournament results
  - practices
  - anything else
- Use the data to make decisions and give awards

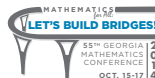
Math Team Points Page



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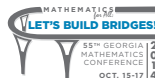
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## “Extra” Curricular!

Present topics outside the curriculum

- modular arithmetic
- counting (combinatorics)
- factoring cleverly
- extending the Pythagorean theorem

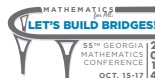
This helps you determine the talent you’ve got



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## Where Do I Go for Those “Extra” Topics?

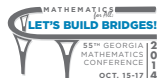
- AMC Math Club package
- Use old contest and tournament problems to spur interest
- Math Circle: [www.mathcircles.org](http://www.mathcircles.org)
- Metro Atlanta Math Circle for Teachers at KSU
- AMS-MSRI Books



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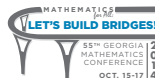
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## Multi-Round In-School Contests

Georgia Math League \$90 fee, paper or on-line  
[www.mathleague.com](http://www.mathleague.com)

Atlantic-Pacific Math League \$80 fee  
[www.atpacmath.com](http://www.atpacmath.com)

American Scholastic Math Association \$80 fee  
[www.asan.com](http://www.asan.com)



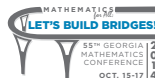


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## Multi-Round In-School Contests

**Continental Math League** grades 2–9 & calculus  
\$95 first team, additional teams \$80  
[www.continentalmathematicsleague.com](http://www.continentalmathematicsleague.com)

**SIGMA Math League** grades 6–9  
\$35 for grade 9 only, \$70 for two grades, \$105  
for more than two grades  
[www.sigmamathcontest.com](http://www.sigmamathcontest.com)



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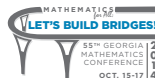
# Multi-Round In-School Contests

Rocket City Math League FREE!

[www.rocketcitymath.org](http://www.rocketcitymath.org)

Mu Alpha Theta Log 1 FREE, but your school must have an active MA $\Theta$  chapter

<http://log1.wamath.net>



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# National Assessment & Testing

**Fall Start-Up** Individual speed contest (Sept.)

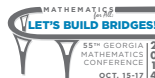
**Team Scramble** Full team speed contest (Nov.)

**Ciphering Time Trials** individual ciphering (Dec.)

**Four-by-Four** 4-person team ciphering (Jan.)

\$40 each; all 4 for \$140

[www.natassessment.com](http://www.natassessment.com)

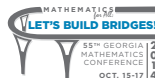


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## American Math Competition (AMC)

\$53 registration plus \$20 per 10

- The premier national math contest
- AMC10/AMC12, each offered twice (Feb 3, Feb 25)
- All previous contests available in books
- AMC → AIME → USAMO
- Deadline to register is in November
- [www.maa.org/math-competitions/amc-contests](http://www.maa.org/math-competitions/amc-contests)

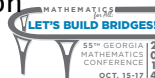


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KSU

## Kennesaw State University Contest – FREE

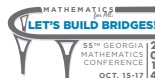
- The most important state-level contest
- Two parts:
  - Part 1 is Oct 29 (25 multiple choice)
  - Part 2 is Jan 27 (5 proofs)
- Awards ceremony in April at KSU
- Deadline to register is October 20
- [math.kennesaw.edu/happening/events/competition](http://math.kennesaw.edu/happening/events/competition)



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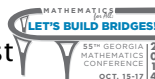
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## There Are Many Tournaments!

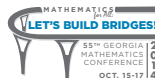
- North Fulton
- UGA
- Rockdale Magnet
- Mercer
- Luella HS
- Lassiter HS
- Vestavia HS
- Grissom HS
- GSW
- AASU
- CSU
- Augusta Regents
- MGSC
- St. Valentine's Mathacre
- Georgia Tech
- UWG
- Georgia Southern
- College of Charleston
- Clemson
- Furman
- CVCC
- Walton MathFest



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## Which Contests Should We Do Then?

“Classroom” versus “Problem-Solving”





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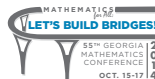
## Which Contests Should We Do Then?

“Classroom” versus “Problem-Solving”

“Classroom” MAΘ, Rocket City

“Problem-Solving” AMC, Math League

Half-and-half KSU, American Scholastic



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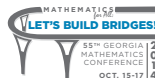
## Which Tournaments Should We Do Then?

“Classroom” versus “Problem-Solving”

“Classroom” Mercer, GSW, CSU, MGSC, UWG, Ga Southern

“Problem-Solving” Fulton, Rockdale, Lassiter, UGA, Furman

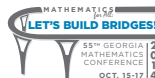
Half-and-half AASU, Luella, Vestavia, Georgia Tech, Clemson



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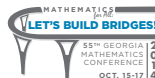
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## Get Someone Else to Pay the Bills!

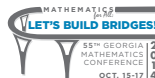
- Ask local businesses – particularly manufacturing and engineering firms
- Sell Math Team T-shirts
- Charge the kids a nominal fee per event
- Ask parents to drive (save on bus costs)
- Ask the PTA
- Get a grant!



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## Getting the School to Pay the Bills!

Good luck with that!



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## Getting the School to Pay the Bills!

- Most principals have a discretionary account
- Share bus costs with another school in your system
- Fundraisers
- Hold a tournament for middle or elementary schools

