

National Society of Black Engineers
Pre-College Initiative Program



2009-20010

TRY-MATH-A-LON TOOLKIT

Updated June 15, 2009

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Welcome to the 2009 - 20010 Try-Math-A-Lon Program!

Many changes were made to the program over the last two years. The first was the change to SAT style questions. The next change was the addition of a second national competition. This was probably a lot to get used to in a short period of time; however they were changes for the betterment of the program, but most importantly for the welfare of the student participating in the program. I wish I could say the time for change has come to an end, but there are ways to track student progress that have yet to be explored. The goal of the program is to increase the math skills of at risk black students in preparation for standardized testing as well as success in college. We have this goal, but no way to track student progress. There have been some questions added to the student aptitude survey in order to capture this metric, as well as the addition of an exit survey at each competition level. This makes it imperative that you use the current year toolkit and forms. We hope that you will find the additions to not significantly impact the registration process for your teams. Taking a little extra time up front could have a tremendous impact on the level of programming.

Now that I have brought up the subject of the level of programming, we must address the issue of quality. I know there have been some typos in the past, and even with eight pairs of eyes on the finished product, some can still be missed. However, I am not speaking merely of typos and symbols that do not display properly; I am referring to wrong answers and mismatched question and answer slides. These types of gross errors sadly have occurred and must come to an end. I cannot promise that the first product will be 100% error free, but I can promise that the committee will do everything in its power to provide a 100% error free product in the future. There will be even more eyes on the final product, and tighter quality controls prior to each competition. This will provide a more professional look and feel to the competition and hopefully increase the impact it has on the community outside of the National Society of Black Engineers.

I would like to conclude with a reminder that Try-Math-A-Lon is supposed to be a fun learning experience for the participating students. While the program culminates in a competition, the most important aspect of the program is the coaching and tutoring that takes place. This is what will make a difference in student progress and achievement. As long as that remains the focus, this program can really make a difference. Tutoring is supposed to happen year round, not just the month before the competition. So, please, do not use the competitions as the goal of your tutoring and coaching sessions, use the fact that their participation could have a significant impact on their college careers, or lack thereof.

Thank you for your participation and dedication to the academic excellence of the participating students.

Carolyn M. Boyd
National Alumni PCI Chairperson
National Society of Black Engineers Alumni Extension

THE MISSION OF NSBE

The Mission of NSBE is to increase the number of culturally responsible Black engineers who excel academically, succeed professionally and positively impact the community.

THE PURPOSE OF TMAL

The purpose of the TMAL competition is to increase at-risk Black students' capabilities when preparing for standardized tests that will allow them to excel academically and succeed in college.

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2009-20010 Try-Math-A-Lon Program
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CONTRIBUTIONS TO TMAL

Contributions to TMAL will help us continue to make this an effective NSBE program available to NSBE Jr. Students nationwide. NSBE PCI will use contributions for program-wide support to give all NSBE Jr. Students the opportunity to participate.

Financial Contributions

To become a TMAL partner, send your financial contributions to:

National Society of Black Engineers
ATTN: NSBE-PCI TMAL Program
205 Daingerfield Road
Alexandria, Virginia 22314
Phone: 703.549.2207

Volunteers

If you would like to become a TMAL volunteer, please contact us at pci@nsbe-ae.org or tmal@nsbe-ae.org.

ACKNOWLEDGEMENT - NSBE CONTRIBUTIONS

Heartfelt gratitude and deepest thanks to the Alumni PCI committee for writing competition questions assisting teams and running competitions at the regional level:

Kamona Ayres, Region 1 Alumni PCI Chair
Quentin Washington, Region 2 Alumni PCI Chair
Morgan Alsberry, Region 2 TMAL Coordinator
Catherine Boyd, Region 4 Alumni PCI Chair
, Region 4 TMAL Coordinator
Corey Kirkendoll, Region 5 Alumni PCI Chair
Recharad Wagner, Region 6 Alumni PCI Chair
Steven Adegebenle, Convention Planning Committee Pre-College Initiative Chair

INTRODUCTION TO NSBE

NSBE

The National Society of Black Engineers (NSBE) was founded in 1975 by six black engineering students at Purdue University nicknamed the Chicago 6. The original aspiration was to establish a student organization to help improve the recruitment and retention of black engineering students. NSBE is now the largest student-managed organization in the United States with more than 25,000 members.

NSBE is comprised of more than 300 chapters on college and university campuses, 75 Alumni Extension chapters nationwide and 298 NSBE Jr. chapters. These chapters are geographically divided into six regions. The NSBE mission is to increase the number of culturally responsible Black engineers who excel academically, succeed professionally and positively impact the community. For more information on NSBE, please visit www.nsbe.org.

In fulfillment of the NSBE objective to “stimulate and develop student interest in the various engineering disciplines”, the Try–Math-A-Lon (TMAL) program and competition was created for pre-college students.

PCI

The Pre-College Initiative (PCI) Program is the focus of the NSBE effort to promote college, academics, technology, and leadership to pre-college students. Our primary focus is to encourage students in grades 6-12 to develop interest in Science, Technology, Engineering and Mathematics (STEM).

The mission of PCI is to lead the world in enhancing the pre-college students' academic, technical, and leadership skills in order to maximize their success in life. The vision is to establish PCI as an incubator for our youth, where they can be nurtured and guided in their academic careers.

NSBE Chapters support PCI through the TMAL program and competition. The purpose of the TMAL competition is to increase at-risk Black students' capabilities when preparing for standardized tests that will allow them to excel academically and succeed in college. The goal of TMAL is to pr their interest and STEM skills in order to prepare them for SAT/ACT standardized testing. TMAL is a national program that holds local, regional, and national competitions.

NSBE Jr.

A vital component of the PCI program is NSBE Jr., which serves as the membership category for pre-college students and institutions that are officially chartered with NSBE. NSBE Jr. members and chapters are at the core of PCI, as they are the primary focus and beneficiaries of PCI programs such as TMAL.

NSBE Jr. focuses on enhancing the education received by African-American and other minority pre-college students, as well as influencing these students to become tomorrow's corporate executives, entrepreneurs, and leaders. In this spirit, NSBE Jr. is the quintessential recruitment, teaching, and preparation device for the NSBE.

For more information on PCI and NSBE Jr. please visit: www.nsbe.org/precollege.

INTRODUCTION TO TMAL

TMAL PROGRAM is a COMPETITION

Try-Math-A-Lon is a tutoring program meant to foster good study habits for at-risk Black students, help prepare for standardized test exams such as the ACT and SAT, promote competition and good sportsmanship. The TMAL competition is held between teams composed of high school students in grades 9-12. The purpose of the competition is to help groom TMAL team members for success in STEM courses and prepare them for standardized SAT/ACT testing.

TMAL Goals

TMAL aims to

- Develop a positive attitude for at-risk Black students towards academic excellence
- Develop a positive attitude towards self
- Stimulate enthusiasm about engineering and science
- Utilize NSBE collegiate and Alumni members as role models

INTRODUCTION TO TMAL TOOLKIT

The TMAL toolkit should be used as a guide for TMAL coaches/advisors to prepare TMAL teams for the local, regional, and national competitions. TMAL coaches/advisors are encouraged to prepare their teams as early as possible, and share TMAL preparatory materials with other math, science, or technology professionals who may be able to assist TMAL teams with competition preparation.

TMAL coaching can begin as early as the summer through March of the next year. The competition season begins with the local competition in each NSBE zone/region or city. Local winning TMAL teams go on to compete for the regional title at the Fall Regional Conferences (FRC). Regional winning teams go on to compete for the national titles at the National Convention. Please see the NSBE WORLD and NSBE USA national competition in the New This Year Section for more information on winning and non-winning teams.

The TMAL toolkit includes the “TMAL Team Package” which is explained below. All forms in the Team Package will be located on NOL.

TMAL Team Package

The TMAL Team Package includes the, Team List, Student Information Sheet, Aptitude Survey, and Pre-Test, which should be completed PRIOR to the local competition. The Post-Test is included to measure success AFTER the national TMAL competition.

The TMAL Team Package is vital to the success of the program and is used to track student progress throughout the year. The pre-test results and the aptitude survey provide good statistical data to the National Try-Math-A-Lon committee in order to gauge the success of the program.

All forms are located on NOL and must be submitted **PRIOR** to the local competition. **Please see the Critical Dates section for important TMAL dates.**

IMPORTANT NOTE: A TMAL coach can prepare more than one TMAL team for the local competition. Winning teams from the local competition become the priority of the TMAL coach who represents the winning team. Please see the description of the NSBE WORLD competition for more information on winning teams in the “NEW THIS YEAR” section. Coaches of “nonwinning” TMAL teams should continue to tutor the team(s) at his/her own discretion. Please see the description of the NSBE USA competition in the “NEW THIS YEAR” section for more information on “non-winning” teams.

Student Information Sheet

The student information sheet documents important information on each TMAL student. All TMAL students must be a paid NSBE Jr. member.

Aptitude Survey

The Aptitude Survey should be given to the students first. The students’ answers to the survey questions will help the chapter identify focus areas that will need to be addressed during the training/tutoring sessions.

Pre-Test

All TMAL teams are administered a mathematics Pre-Test to assess each student’s mathematical skills. From that point, TMAL coaches serve as mentors and role models for the students to coach and encourage team members to improve their math skills.

The Pre-Test should be administered after the Aptitude Survey and must be given to each student before any tutoring takes place. The test is an overview of basic math concepts and the results will help to identify a student’s weaknesses in math skills and understanding. The TMAL coach and team can then use the test results along with a variety of tools (e.g. SAT/ACT workbooks), to focus on these problem areas and provide additional tutoring.

The Pre-Test is not a pass/fail test and there is no time limit. Students should be given the maximum amount of time available to complete the examination. After the tests have been taken, the team should begin training/tutoring sessions to help prepare students for the competitions.

TMAL Team List

The TMAL team list is used to identify each TMAL team by the coach and the team members (four team members and one **mandatory alternate** member).

CRITICAL 2009 - 2010 DATES

For quick reference, the following target dates are listed to ensure your participation in the TMAL competition.

Team Responsibility And Events	Target Timeframe (No later than)
TMAL Team Registration	<p>Registration NO LATER THAN two weeks after your Regional Leadership Conference.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Final submission deadline is September 25, 2009. After this date no further registrations will be accepted for the TMAL World competition track.</p> </div>
TMAL Team Training	Held throughout most of the school year, April 2009 - March 2010
Local Competitions/Transcripts	<p>Held NO LATER THAN three weeks prior to the Fall Regional Conference and approved by Regional TMAL Coordinator.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Region 1 deadline is October 25, 2009 Region 2 deadline is November 1, 2009 Region 3 deadline is October 18, 2009 Region 4 deadline is October 25, 2009 Region 5 deadline is October 11, 2009 Region 6 deadline is TBD</p> </div>
Regional Competitions	<p>Region I Rochester Radisson Rochester, NY November 12 – 15, 2009</p> <p>Region II Sheraton Greensboro Greensboro, North Carolina November 19 – 22, 2009</p> <p>Region III Crowne Plaza Airport Atlanta, Georgia November 5 – 8, 2009</p>

	Region IV Hyatt Regency Columbus Columbus, Ohio November 12 – 15, 2009 Region V Marriott Southern Hills Tulsa, Oklahoma October 29 – November 1, 2009 Region VI Las Vegas, NV
Winners of TMAL World Registration Deadline	December 4, 2009
TMAL USA Deadline	February 5, 2010
National Competition	Held at the NSBE National Conference, Toronto, Canada March 31 – April 4, 2010

For further information on the upcoming NSBE conferences, please visit www.nsbe.org. For more information on NSBE events and programs login on NOL and view events, scholarships and competitions. (You must be a NSBE member to login to NOL.)

TMAL COMPETITION

The aim of NSBE is for each TMAL team to compete in a local competition held in a NSBE zone or in your area in order to advance to Fall Regional Conference (FRC) TMAL competition to compete. Winning local teams from each zone go on to compete at the regional TMAL competition held in each of the six NSBE regions, at the FRC. The winning regional TMAL teams go on to compete for the TMAL WORLD national competition title, to be held at the NSBE National Convention in Toronto, Canada March 31, 2010 - April 4, 2010. The entry form for the winners of the TMAL WORLD competition must be submitted by **December 4, 2009**.

All TMAL teams who do not become winners of the regional TMAL competition automatically qualify to enter the TMAL USA national competition. The entry form for the TMAL USA competition must be submitted by **February 5, 2010**.

Team Requirements

Every TMAL team must:

Consist of four members and an optional alternate

Be a combination of students in grades 9-12

TMAL teams CANNOT CONSIST OF FOUR SENIORS!!!!

Be paid NSBE Jr. Members

Have a current advisor/coach that is a paid NSBE Alumni member

Register with the Regional TMAL coordinator (see page 14)
(Please contact the National TMAL Coordinator at pci@nsbe-ae.org to get the contact information for your Regional coordinator or see page 14).

Current Transcripts are submitted to WHQ.

TMAL teams that do not meet all the above criteria will not be allowed to participate in ANY Try-Math-A-Lon competitions.

Cost

There is no cost to participate in the TMAL competition. TMAL funding is provided by gifts and volunteering to NSBE. If you or another party would like to contribute to the NSBE TMAL program, please see the Contributions to TMAL section in this toolkit.

Competition Curriculum

TMAL questions are written with the curricula for grades 9-12 in mind. In addition, many problems are designed to challenge and accelerate student learning, and questions become progressively more difficult at each level of the TMAL competition. Math, science, and engineering topics include:

- **Algebra and Functions**
- **Data Analysis, Statistics and Probability**
- **Geometry and Measurements**
- **Numbers and Operations**
- **Problem Solving**
- **Real World Engineering Questions**
- **NSBE History**

The contest is divided into three events held in the order listed:

Event 1: The Progress Assessment Test (PAT)

The PAT is a timed test given to assess students' ability in response to various standardized test math questions. (No calculators are permitted). In addition, there will be 5 to 10 NSBE facts or NSBE History added to the PAT.

Event 2: The Engineering Contest (TEC)

TEC is timed and measures teams' ability to solve a real-world engineering problem. The contest promotes engineering, math, and science skills and encourages teamwork (One calculator is provided to each team)

Event 3: The Quiz Bowl

The final event, a Quiz Bowl, is predominately a mathematics competition in the style of the television game show Jeopardy, where quick thinking and problem solving skills are tested. Black inventor and scientist knowledge is also quizzed in this event. (No calculators are permitted.)

Competition Scoring and Results

Each team is awarded a numerical score in each of the three events. At the end of the competition the total points earned by each team is computed. The team with the highest point total is the winner. There is one winning TMAL team at each local, regional, and national TMAL competition.

How to score the PAT – all 5 team members can take the PAT, however the alternate's score is not included in the final PAT score, there the maximum points is 400 which is 100 maximum points per member of the team.

How to score the TEC - The total score for the TEC is 100 pts.

TMAL WORLD National Competition

The TMAL WORLD Competition exercises the traditional TMAL format during the course of the year. To compete in the TMAL WORLD competition, your team must win your regional competition.

All regional winning teams are representatives for their region and compete at the national TMAL WORLD competition held at the NSBE national conference, to be held in Toronto, Canada March 31, 2010 - April 4, 2010.

TMAL USA National Competition

The TMAL USA national competition is designed to measure excellence in TMAL teams who

- a. Did not register by the deadline for participation in the local competition
- b. Did not win a local competition
- c. Did not win their regional competition held at FRC.

The TMAL USA national competition will use the PAT to eliminate teams and facilitate a final winning round of six (6) competing TMAL USA teams. The final winning round of six TMAL USA teams should include one team from each region based on participation.

The TMAL USA national competition is an alternate competition created to ensure that all students receive year round tutoring and training. It provides an opportunity for students who are not high achievers to receive the same level of attention and tutoring that the top students receive.

Awards, Trophies, and Scholarships

Awards, trophies, and/or scholarships are given to teams who win at each competition level. Regional winning TMAL teams receive scholarships as travel assistance to compete in the TMAL WORLD competition.

TMAL teams who come to the national conference to participate in the TMAL USA national competition will not receive any awards, trophies, or scholarships until they become winning teams at the TMAL USA national competition.

NSBE will recognize both winning teams of the TMAL World and the TMAL USA competition winners at the national conference with different awards, trophies, and scholarships according to NSBE allocations.

Local competitions awards and trophies will be purchased by the sponsoring/participating local NSBE alumni chapters.

2009-2010 TMAL COMMITTEE

If you have any questions about this toolkit or Try-Math-A-Lon in general, please contact your Regional Alumni PCI Chairperson/TMAL Coordinator or the National Alumni PCI Chair. The following are TMAL coordinators' email addresses and phone numbers:

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