

MathNerds Mentoring Networks

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What is MathNerds?

- A Non-profit Corporation
- All services free!
- Free Automated Question & Response Service
- Bi-lingual – English and Spanish
- Volunteer Team of 140 Members (anyone may volunteer)
- Volunteers choose volume of questions by categories
- Q&R Service is Monitored
- 140,000 Hits/Month
- 100,000 Page Views/Month
- 21,000 Visits
- 1,200 Questions/Month
- 150,000 Questions in Online Database
- Archive of Inquiry-based Materials
- Links Page to Other Good Math Sites
- Number 3 on Yahoo Search for “free math help”
- Number 5 on Google Search for “free math help”

How do people participate in MathNerds?

- As team members (volunteers)
- As a clients (ask a question!)
- As classes (MathNerds Mentoring Network – can connect your class to a university level class)

Media Coverage

- 2007 "Nerd is the word," Kang, De Angelis, Mahavier, Stenger, [Horizons](#), [MAA](#)
- 2007 "\$350K Grant Goes to Math Education," [Beaumont Enterprise](#)
- 2003 MathNerds Featured on KDFM [Channel 6 News](#)
- 2003 "Math-E-Matics: Helping with math homework everywhere gives nerds a good name," Cathy Cashio, [The North Texan](#)
- 2002 "MathNerds Offers Discovery-Style Mathematics on the Web," De Angelis, Dawkins, Mahavier, and Stenger, MAA Newsletter, [FOCUS](#)
- 2002 "Ask the MathNerds," [Cardinal Cadence](#)
- 2002 "Your Mentor in Cyberspace is Standing By Now," Jennifer Medina, [New York Times](#)
- 2000 "MathNerds," [Woman's World Magazine](#)
- 2000 "On-line Homework Helpers," [Working Mother Magazine](#)
- 2000 MathNerds Review: [Education World](#)
- 1998 "The Math Doctor," [Acadiana Profile](#)

Team Member Appointments

- Academic

Amherst College, Arizona State University, Carnegie Mellon University, Colby College, Guilford College, Illinois Institute of Technology, Harvard University, Harvey Mudd, Hebrew University, James Madison University, Lisbon University, Michigan State, New York University, North Carolina State University, Northwestern University, Oakland University, Old Dominion University, Oxford University, Princeton University, San Francisco State University, Tel-Aviv University, Texas State University San Marcos, Texas Tech University, Tulane University, United States Military Academy, Universidade de Lisboa Portugal, University of California Berkeley, University of California Davis, University of California Los Angeles, University of California Santa Barbara, University of Colorado at Boulder, University of Kentucky, University of Maryland, University of New Orleans, University of North Texas, University of Rochester, University of Texas at Dallas, Woodcliff Academy, Youngstown State University

- Industry

AOL/Time Warner, Microsoft, Lockheed Martin, Naval Reactors, Northrop Grumman, Texas Instruments, TRW, Worldspan

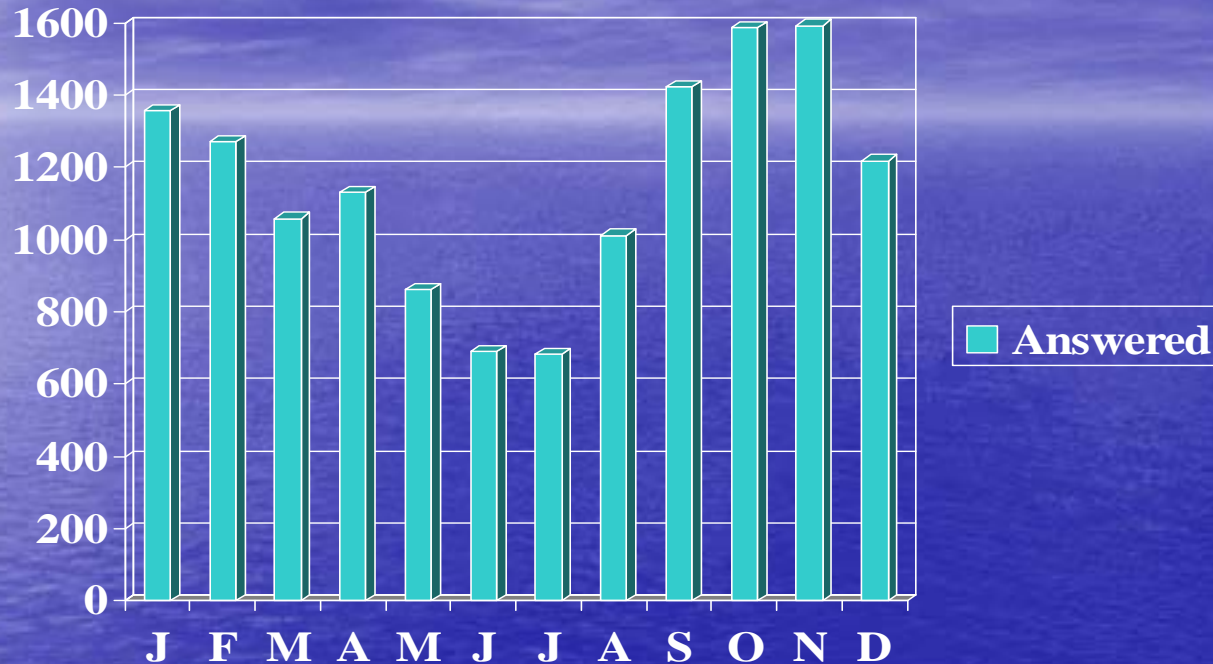
- High Schools

International Mathematics Olympiad
Numerous Outstanding High School Students and Teachers

Team Member Appointments

Oakland University, Lakes Community College, Illinois Institute of Technology, San Francisco State, Tel-Aviv University, State of Arizona, Retired US Army Civilian, Texas Instruments, Institute for Peoples Education and Action, James Madison University, Diocesan Boys School of Hong Kong, Illinois Math/Science Academy, Microsoft, JEA, Black Sea Technical University, Tbilisi State University, Lamar University, Indian Institute of Science, Xavier University of Louisiana, Amherst College Massachusetts, Upper Canada District Board of Education, Rowan University, du Toit University of South Africa, DuFour Starr Academy, Portland State University, Bakersfield College, NYC Board of Education, UC Santa Barbara, De Anza College, Canisius College, Rocky Mountain International Academy, University Michigan, Guilford College, Memorial University of Newfoundland & Herdman College, Intellectual Ventures Washington, Stanford University, American Airlines, Naval Reactors, Youngstown State University, Career Launcher, Comenius University, Kosparsov High School Ethiopia, Alphon Corp, Lao University of the Philippines, Old Dominion University, Northrop Grumman, UDLA Mexico, Shimer College, Tutor Time Learning Center, The University of South Dakota, Falmouth Public Schools, Midlands Technical College South Carolina, SAS Oklahoma, Tulane Louisiana, Southern Oregon University, John Wood Community College, Albany County Social Services, New York, Montclair State University New Jersey, Arizona State University, Hebrew University Israel, West Virginia University, University of Nottingham, Raridon, University of North Carolina at Charlotte, LandSHark, LLC, Colby College, Governors School for Science and Mathematics, University of North Texas, Georgia Southern University, Western International University, AOL/Time Warner, self-employed, Murray State University, University of New Orleans, University of Texas at Dallas, Alabama State University, Texas State University Texas - San Marcos, University of Maryland, Mersive Technologies, St. Paul Travelers(Actuary), Youngstown State University, University of Maryland, Compugen Israel, Northwestern University, University of California Santa Barbara, Texas Tech University, De La Salle University, SMUK 7 -1 Singapore, Princeton University, Nicholls State University, Universidade de Lisboa Portugal, Harvey Mudd, Volunteer State Community College, Willard School Maine, University of Twente Holland, Colby College Maine, Worldspan, New York University, Instituto Superior Técnico Portugal, Coso Community College California, Virginia Commonwealth University, Tsinghua University China, Oxford University, Lisbon University, North Carolina State University, Crisp University of Newcastle (Australia), NMSU New Mexico Paul, University of Vermont, Harvard College New Jersey, Exeter Academy FL, Central Washington University, University of Alabama in Huntsville, Westminster College PA, Hebrew University of Jerusalem, Motorola TX,Portmeadow, Inc CA, Washington University, UC Berkeley California, Cambridge Pa, University of Central Arkansas, Raindance Communications CO, Hardee NC Community College System, University of Missouri - Rolla, University of East Anglia UG, School Bangladesh, Pantano Restaurant NY, Drake University, United States Military Academy NY, Imperial College London, University of Kentucky, University of Rochester NY, Midlands Technical College SC, University of Colorado at Boulder Colorado, University of North Texas Texas, University of California Los Angeles, LaRue County KY, Kenyon Ocean Lakes Math & Science Magnet Academy, TRW Colorado, Ratna Junior College, Mercer University Georgia, Cedarville University OH, Union College NY, University of California, Davis, X-Ware Arizona, MIT, University of Alabama in Huntsville, University of Winnipeg Manitoba, Lee College, University of Chicago, US Govt, McDermott, Washington University, Akamai Technologies, The University of Akron School of Law OH, Ohio State University, Christian Heritage Academy, St. Xavier, The Malawi Polytechnic, Seattle Central Community College, Independent Learning Centre - TV Ontario, Air Force, Spheres Academic Services, SUNY Plattsburgh NY, O&A Associates, Hardin-Simmons University, Syracuse University, Temple University PA, University of Missouri-Columbia, Trinity College South Australia, Latvian University, University of Wisconsin, Ragnarsson College Sweden, PROS Strategic Solutions TX, Sul Ross State University, Community College of Philadelphia Pennsylvania, Georgia Institute of Technology, Sharp University of Bath UK, Peel Board of Education Ontario, Reed College, Mathworks DC, UC Berkeley CA, Central Missouri State University, University of Iowa, Carnegie Mellon University, Youngstown State University, Grand Valley State University, Cornell University, Montclair State University, Woodcliff Academy, Bedford Central School District NY, Mitretek Systems VA, Carmike Cinemas TN, Harvard MA, West Chester University Pennsylvania, Chicago Public Schools, Truman College, University of Arizona, Emory and Henry College, Birkenhead School, National Cancer Institute, Lockheed Martin, Politechnics Bucharest Romania, National Institute of Education, Republic of Singapore, Manhattan Gymnastics Center

Question Responses - 2006



- Average Number Responses Per Month: 1158
- Average Monthly Percent Responded: 97%
- Average Response Time: 16 Hours
- 3% Rejection Rate

Typical Question

Date Submitted : 4/21/2006 6:53:00 PM

Assigned To : Suzie Q. TeamMember (suzie-q@email.com)

From : jorge (jorge@nowhere.com)

Category : Algebra

Question:

What exactly makes the slope of a vertical line undefined?

Work Done:

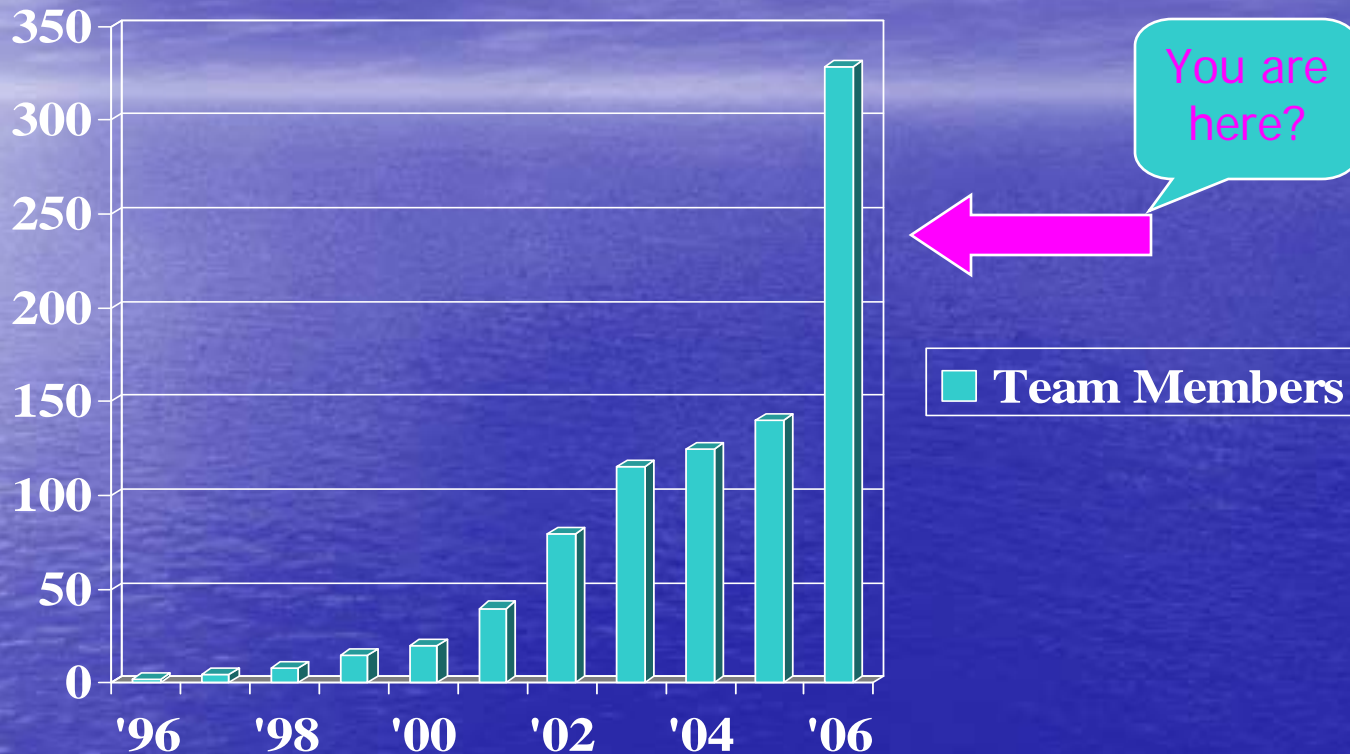
Slope of a vertical line is $1/0$. Is it undefined because you can't divide anything into 0 (or no) pieces?

Click [Here](#) Respond Or Click [Here](#) to Send to the General Queue

From the Clients

- Hey, this website is awesome! I wasn't really struggling in math. I just wasn't up to the potential I could be at. Now I'm doing better than before and can say I'm not just passing, but acing it.:) :) :)
- hey...i really like this website because it helps me on my math problems ...especially word problems....of course i have good.....news!!!!!!!!!!!!!!1i got an A on my math....all because of you guys....i love you allllllllllllllllll very much.....reply bak!!!!
- Hi. I just asked a question and it literally took, what? 5 minutes to get it answered. I am so grateful for finding this site and getting the help I needed. I LOVE YOU MATHNERDS! YOU'RE THE BEST! P.S. Is it possible for me info on the person that helped me? I would like to thank them personally.
- sum time back i got immense help from this site regarding my math problems...now i'm over with exams n got A(95%) in maths ..a lot of whose credit goes 2 this wonderful site...

Team Member Growth By Year



More that 602 people have volunteered on the project since its inception.

Student Activity Question

- **Question:** x can complete a piece of work in 9 days and y can complete the same work in 18 days. how long will x and y take to complete the work together
- **Work Done:** x=9days y=18days
- **MathNerds Answer:** <http://www.purplemath.com/modules/workprob2.htm> At the link above, you will find some really good examples of this type of problem. If the link isn't hot, copy/paste the address into your browser.
- **Client reply:** actually i still confuse with it .could you lead me to the steps to solve this question?
- **MathNerds Answer:** Consider that person 'x' can do $\frac{1}{9}$ of the job in one day and person 'y' can do $\frac{1}{18}$ of the job in one day. Add these two fractions together for how
- **Client reply:** thanks a lot and i had found my answer!!
- **MathNerds Answer:** Great! Good work! Have a wonderful day. MaryE

Student Activity Question

MathNerds Question:

What exactly makes the slope of a vertical line undefined?

Work Done:

Slope of a vertical line is $1/0$. Is it undefined because you can't divide anything into 0 (or no) pieces?

Put your answer here.

MathNerds Mentoring Networks – Linking Universities to School Districts

- Lamar Math Club linked to Silsbee
- Lamar Advanced Calculus Class linked to Harrisonburg High School
- Texas State Introductory Education Class Linked to San Marcos ISD
- St. Michael's Indian School Linked to Texas State
- James Madison University linked to Harrisonburg ISD
- Sam Houston? Angelo State?

Why Do It?

- Collaboration with Texas State University and Lamar University
- Professional Learning Communities (PLC)
- Problem Solving Skills-Objective 6
- Developing Self-Directed Learning Skills
- Technology TEKS
- College Awareness

Technology TEKS

- ✦ **Uses a variety of strategies to acquire information from electronic resources, with appropriate supervision.**
- ✦ **Acquires electronic information variety of formats, with appropriate supervision.**
- ✦ **Uses on-line help and documentation.**
- ✦ **Uses research skills and electronic communication, with appropriate supervision, to create new knowledge.**
- ✦ **Many More...**

Self-Directed Learning

- #Benefits to All Students
- #Benefits to Exceptional Students
- #Benefits to Teachers
- #Source for Help within Classroom
- #Developing Lifelong Learners
- #Motivational Aspects

What the future teachers say

- I had no real idea what the kids would be studying and the advanced nature of it was interesting and surprising.
- I did learn how to explain things in different ways, geared towards the child's individual needs.
- Kids are bright! They also respond best when encouragement is given along with help.
- Even from this one question I saw how children need a lot of guidance when being taught and that you can't just throw a question at them and expect them to know how to do it. I also did not realize how much things have changed since I was in the fifth grade and how much more challenging it is now. When working out the problem sheet we were given earlier in the semester I found myself actually having to think through the problem and figure out how to solve it.
- The most challenging part was trying to figure out a way to just not tell him if he was right or wrong, but giving him ways to check his answer himself and let him figure out if he is right or wrong. I wanted him to realize when and if he made a mistake and why he did so.
- I learned that sometimes it is not the numbers that are confusing but what the question is asking you to do with those numbers.
- I need to practice my word problem solving skills!
- I surprised myself by knowing how to help these students, not by memory, but by actually working out the problems.
- MathNerds is a great thing that helps students and keeps the instructor (like myself) thinking about math and her problem solving skills sharp.

College Awareness

- ✓ SMCISD Board Goal #1: The district will promote a college education preparation culture and will graduate students fully prepared for college level work
- ✓ Meet Actual College Students
- ✓ Interact with Same Students
- ✓ Learn New Ways of Problem Solving

Teacher Benefits

- Students get extra practice and help
- Very little extra paperwork for you
- Grant Possibilities
- Helps students verbalize questions
...moving away from "I don't get it!"
- Fun for the kids and easy for you
- Possibilities for the future with Math Nerds

Questions?

- www.mathnerds.com
- www.mathnerds.com/mathnerds/mentoringnetwork
- W. Ted Mahavier – wtm@mathnerds.com
- Wendy Woodland – twendy24@hotmail.com