



SMARTHINKING™

Online Math Tutoring

Promote your students' success in math by providing tutoring when they need it—even if it's midnight.

With SMARTHINKING's Online Tutoring Services, students have 24/7 access to experienced math tutors, 85% of whom have a masters or Ph.D. in math. Our tutors engage students in the

learning process by using a virtual whiteboard equipped with a variety of math tools. Students are taught the underlying math concepts, helping them tackle future assignments on their own.

SMARTHINKING's Online Tutoring is used by ...

- Baylor University
- University of Texas Telecampus
- University of North Dakota
- University of New Mexico
- Rio Salado College
- Hillsborough Community College
- Capella University
- Bergen Community College
- Ohio Learning Network
- West Virginia Higher Education Policy Commission
- And over 250 other institutions

Give Your Students the Math Support They Need with SMARTHINKING's Online Tutoring

One-On-One Assistance. Our tutors provide help at the “teachable moment.” Their extensive teaching experience with students of diverse abilities and learning styles enables them to focus on the needs of each student.

Active Learning. Tutors assist students in learning the underlying concepts involved in their math problems; they do not solve the problems for students. Using an online whiteboard for live, real-time collaboration, tutors engage students in the learning process.

Convenient and Easy Access. Our math tutors are available online 24 hours a day, 7 days a week. Students may work with tutors in a “live” session, submit questions in writing and receive a response within 24 hours, or schedule an appointment with a specific tutor.

Increased Faculty Support. With SMARTHINKING providing around-the-clock math tutoring, faculty can spend valuable class time focusing on new topics. Faculty can also review individual tutoring sessions and monitor student progress.

Experienced Tutors. Our tutors have substantial teaching experience, and over 85% hold a masters degree or Ph.D. in math. The tutor selection process is rigorous, and, after passing a thorough competency and personal screening, our tutors receive on-going oversight, including pedagogical and technical training.

Math Tutoring is Available for All Students

- Basic Math
- Algebra
- Geometry
- Trigonometry
- Pre-Calculus
- Single-Variable Calculus



With SMARTHINKING, we've been able to provide academic tutoring at the “teachable moment” for both on- and off-campus students. We see this as a complement to our on-campus tutoring services and, thus, it expands the availability for student access to tutoring.”

*Dr. James M. Shaeffer
Dean of Outreach Programs
University of North Dakota*

Here's an example of a live, drop-in tutorial session in math.

Using the virtual whiteboard, our tutor, Jon, guides Dave through solving a tough calculus problem. Note how the tutor (in black) guides the student (in purple) through the process of solving the equation.

Using a problem-based teaching style, our tutors help students learn the underlying math concepts. They do not solve the problem for students. In this way, students learn to handle future assignments on their own.



SMARTHINKING has been an invaluable resource! I've found their basic math tutoring beneficial. The instructors are extremely knowledgeable, helpful, responsive, and patient. The hours are convenient, and all my questions have been answered promptly... Anyone who needs additional assistance in their studies should take advantage of SMARTHINKING."

*Student
Johns Hopkins University*

Hi Jon, my name is Dave
 $\int \ln(y^2 + 9) dy$ I am not sure how to approach this problem, can you give me a hint?

Hi Dave. This looks daunting. But the method that works on it is the method you usually use when you have one type of a function times another for the integrand.

If you had $\int x \sin(x) dx$, what method would you use here ?

I would use the integration by parts method
 So should the integral be broken as $\ln(y^2) \cdot \ln(9)$

You've got that backwards... $\ln(ab) = \ln(a) + \ln(b)$ a common misconception { $\ln(a+b) \neq \ln(a)\ln(b)$ }

Right now I don't have a clue as how to break it up

This one can drive you nuts until you see how it breaks up... but you just don't think of doing it that way. I'll give you a hint.

If $u = \ln(y^2 + 9)$, what is left over for $dv = ?$ $\frac{2y}{y^2 + 9}$ that's du

remember the integrand becomes $u \cdot dv$

Oh then it would be one

Almost... it's $dv = 1 \cdot dy$

$$\int \frac{\ln(y^2 + 9) dy}{u \quad ? \quad dv}$$

okay so now I would treat it as an integration by parts

with $\int u dv = uv - \int v du$ Yes, but once you apply parts, you still have to integrate

$$\int v du \quad \text{still no small task}$$

okay Jon I am going to take off and give it a shot usually with these it's just getting started that gets me in trouble thank you very much for your help bye for now

Good luck. It takes a while to learn to recognize when to use parts.

It will still be a challenging integral, though, so come back if it stumps you.

Believe me I will, see you later

Bye...

SMARTHINKING offers the following subjects for online tutoring...

**Math • Math en Español • Statistics • Spanish
 Accounting • Economics • Chemistry • Biology • Physics**

As well as The Online Writing Lab

► Hours of availability vary. Go to www.smarthinking.com for more information and schedules.



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