Welcome to SEARCH 2008! We hope you're anticipating an exciting and challenging experience, despite the groans of dismay your friends may have uttered when you told them you were going to spend the summer doing mathematics! We congratulate you on taking an important step toward unlocking the doors to some of the most exciting careers of tomorrow.

Learning mathematics not only opens doors of opportunity, but also is satisfying in and of itself. At SEARCH you will discover that mathematics is a way of thinking, and even a way of thinking about thinking -- of turning inward and observing your mind at work. You will also learn to recognize the presence of mathematics in the world around you -- from the smallest snail to the farthest reaches of the universe.

SEARCH offers you even more. This summer, you will meet people from all over the country and will learn to live and work cooperatively. You will experience the delights of joining other young women in intellectual pursuits, of sharing frustrations, successes, and new insights, and of strengthening your determination. You will feel a sense of accomplishment. You will learn how to budget your time. You will be self-reflective. You will have the opportunity to play sports, learn arts and crafts, watch movies, engage in discussions, and travel. In short, you will have fun, both in and out of the classroom.

At SEARCH, students and staff work together to build a strong community. We help one another experience mathematics as a genuinely human endeavor, one that requires not only our minds but also our hearts.

We’re glad you’re a SEARCH student and we are looking forward to getting to know you!

Char & Jim Morrow  
Directors, SummerMath/SEARCH
Mount Holyoke College is the oldest continuing institution of higher education for women in the country. It was founded in 1837 when higher education for women was a revolutionary idea.

Mount Holyoke maintains a firm commitment to the liberal arts. The college offers a broad range of curriculum choices to its 2,200 students and encourages students to be creative in their selection of a course of study. There are 25 departments. Although the majority of students stay within the traditional disciplinary fields, increasing numbers are selecting interdisciplinary majors or creating their own majors. Mount Holyoke has become well known for producing large numbers of female scientists. In addition, its innovative calculus curriculum has received wide praise. Students in the sciences work with sophisticated laboratory equipment, and students in the arts have access to modern studio facilities.

Mount Holyoke's campus was recently named the most beautiful in America. The campus is comprised of forty buildings set on 800-acres of rolling lawns, of wooded hills, and of two lakes. In addition, the campus boasts sixteen tennis courts, and 18-hole golf course, a fitness trail and jogging course, a new equestrian center, and horseback riding trails. SummerMath students may use the squash courts, racquetball courts, swimming pool, dance studios, weight rooms at the college's state-of-the-art indoor sports complex.

Mount Holyoke College has always sought and welcomed students of all backgrounds, regardless of race, color, handicap, or national or ethnic origin. Our admissions, financial aid, and employment practices adhere strictly to this policy, and we require that our programs and organizations do so as well.

Mount Holyoke College is part of the Five College Consortium encompassing also Smith College, Hampshire College, Amherst College, and the University of Massachusetts Amherst. Through the consortium, Mount Holyoke students gain access to a broad range of resources.
ARRIVAL AND DEPARTURE

Upon arrival, you will be welcomed by the staff. Rooms will be open for occupancy any time after lunch on Saturday, June 28. Food service in the dormitory will open starting with Saturday dinner. A complimentary lunch will be served to students and families on Sunday, June 29. All students must arrive in time for the orientation program on Sunday, June 29. Your participation in Orientation is essential to ensure the best start possible at SEARCH.

Transportation will be available from Bradley International Airport and the bus and train stations in Springfield, MA, on Saturday, June 28, and Sunday, June 29. In order to be met by a staff member, you must let us know your arrival plans in advance.

During the last day of the program, Saturday July 26, there will be an open house and brunch for all parents and students. Students should arrange to depart Saturday, no later than 3pm -- when the dorm closes. Transportation will be available to Bradley Airport and the bus and train stations on that day. Information regarding open house will come later in the summer.

RESIDENTIAL LIFE

The Residence Hall
Each student is provided with a bed, bureau, mirror, desk, and desk chair. Walking into a bare, lifeless room can be a shock, but decorating can be a lot of fun! With some imagination you can create that "lived-in" look in just a few days. For example, consider covering your trunks with cloth and using them as extra pieces of furniture. Feel free to bring your favorite pictures and posters from home.

The program provides each student with a blanket and pillow (but you might prefer to bring your own pillow), bed linen (two sheets and one pillowcase), and hand linen (one towel and one washcloth). Fresh linens are provided weekly. Washing machines and dryers are available in the dormitory for doing personal laundry.

Electricity is 120 volts alternating current. To prevent overloading the circuitry, students in single rooms must limit themselves to using no more than 250 watts of electricity and students in double rooms to no more than 400 watts. Fire safety regulations prohibit student from using the following items in their room: bulbs over 100 watts, cooking and water-heating appliances, heat or therapeutic lamps, irons, and space heaters. Ironing may be done in designated areas, which are equipped with irons, and ironing boards.

Communal Areas
Communal living spaces in the residence hall include living rooms, a dining room, lounges, and kitchenettes. A television set, a VCR, numerous board games, and, believe it or not, a baby grand piano will be provided for your use.

Weekends
On one Saturday we will take a field trip to the Boston Museum of Science and Cambridge (location of Harvard University and MIT). On the other two Saturdays, we will go to a New England attraction, and tour the nearby colleges and surrounding area. You may also wish to schedule campus tours and/or interviews at Mount Holyoke and nearby colleges for Friday afternoons. Ask the Head Resident or Directors for information.

Religious Services
Although there are no regularly scheduled religious services held on the campus during the summer, the Residential staff can arrange transportation to and from services at nearby churches, synagogues, and mosques.
DAILY SCHEDULE

8:45 – 12:00   Research Session

The morning session will give you the experience of a collaborative research-like environment. So, what is this "collaborative research-like environment"? Well, it's working as a team — that's the collaborative part. And there is "research," which, at least ideally, means studying something that you really care about. In mathematics, doing research also involves trying to solve some problems and even making up your own problems to solve. (We got you started on this with the SEARCH application problem packet.)

We'll start off the program by getting to know each other, doing some warm-up problems, and getting some background information about the research topic you'll be working on.

After the first couple days, you'll be defining and working on problems, The faculty leaders will present some information, but mainly the faculty leaders and TAs will be circulating about the room, asking questions about what you've tried, asking what conclusions you may have come to, suggesting other possible approaches, and probably saying, "Wow, How did you think of that!"

Sessions are very informal. There will be a break at around mid-morning.

12:00 – 1:00   Lunch

1:00 – 2:30   Using Mathematical Software/Guest Lectures

For three or four days per week you'll be working with software in this time slot. We'll introduce you to a spreadsheet program, and have you solve some problems with it. You'll explore different types of functions, and apply them to some real-world problems. You will also have an introduction to one or two other software programs frequently used by mathematicians.

On some days we'll have a guest lecture from a visiting or Mount Holyoke mathematician to introduce additional topics and to tell you about the possibilities for a life as a mathematician or scientist.

3:00 – 4:00   Recreation

You'll get to do some physical recreation ranging from walking to competitive sports activities. For this, you'll join students from the associated SummerMath program at Mount Holyoke.

4:00 – 6:30   Free Time, and Dinner

6:30 – 8:00   Problem Session

On two or three evenings each week you will work independently on some fun problems in groups with the help of TAs.

8:00 – 10:00   Movies/Free Time

We plan to show videos like Fermat's Last Theorem video, Let Us Teach Guessing, and The Shape of Space, movies or parts of movies, such as Fermat's Last Tango, It's My Turn, A Brief History of Time, Antonia's Line, and some videos produced by the California Institute of Technology. Also, such software as KaleidoMania! and other mathematically and design-oriented software will be available for your use.

We will alternate between having evening movie sessions and giving you free time to interact with other SEARCH students and with SummerMath students more informally, to use computer labs, and to walk on campus and the adjoining "shopping" area.

In addition to the regular faculty, Jim & Char Morrow, we will have guest faculty, each visiting for a week. There will also be one Assistant Instructor and one TA who will be here for the entire program.

Our guest faculty are:

Dr. Maura Murray, Salem State College (MA)
Dr Reva Kasman, Grand Valley State College (MI)
Dr. Ulrica Parker, Emory University (GA) and Claremont College (CA)
Dr. Shirley Shmerling, University of Massachusetts

Teaching Assistant: TBA
Key Card/Key
When you arrive at the residence hall, you will receive a key card to the hall and a key to your room. At this time, we will collect a $25.00 deposit from you. Your key card will be your meal ticket, library card, and, in general, serve to identify you as a SEARCH participant. In order to do laundry, you will need to deposit money on your card and then use it to do laundry. Your deposit will be returned when you hand in your key and key card at the end of the program.

Reception Desk
A SEARCH staff member will staff the reception desk in the dormitory from 7:00 pm until 10:30 pm on weeknights and from 7:00 pm to 11:30 pm on Fridays and Saturdays. The staff member will monitor activity in the building, answer the reception desk telephone, and answer students' questions about evening activities and the like.

Meals
All meals are served in the Blanchard Cafe located in the Blanchard Campus Center.

Vegetarian entrees are available at all meals. If you have other dietary restrictions, you should contact the directors as soon as possible.

Approximate meal times are listed below. The schedule will be posted when you arrive.

<table>
<thead>
<tr>
<th>Monday through Friday</th>
<th>Saturday and Sunday</th>
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<tbody>
<tr>
<td>Breakfast:</td>
<td>Breakfast:</td>
</tr>
<tr>
<td>7:45 - 9:00</td>
<td>8:30 - 9:30</td>
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<tr>
<td>Lunch:</td>
<td>Lunch:</td>
</tr>
<tr>
<td>12:15 - 1:15</td>
<td>11:45 - 1:00</td>
</tr>
<tr>
<td>Dinner:</td>
<td>Dinner:</td>
</tr>
<tr>
<td>5:30 - 6:15</td>
<td>5:30 - 6:15</td>
</tr>
</tbody>
</table>

Staff members often come to meals. Take this opportunity to get to know them better!

Mail
Mail delivery is one of the highlights of the day! All mail (except packages) is delivered to the residence hall, Monday through Friday only, where it is distributed after afternoon recreational activities. No mail, FedEx, UPS, etc. is delivered on Saturday, Sunday, or holidays. You will get your mail as long as it is addressed as shown at the top of the next page. Be sure to include the title "SummerMath/SEARCH"! If you receive a package, you will be notified when you get your regular mail. You may pick up packages in the SummerMath/SEARCH office.

Mailing Address for SEARCH Participants
(Your Name)
SEARCH/SummerMath
50 College Street
Mount Holyoke College
South Hadley, MA 01075-1441

E-Mail
Each student will have access to the her e-mail account(s) through the Internet. If you do not have an account, you can request a complimentary Mount Holyoke College e-mail account to use while at SEARCH. Be sure to bring the e-mail addresses of your friends and family so you can write to them. The Internet can be accessed through computers in the dormitory as well as many other locations on campus. Dorm rooms have Ethernet outlets and can be used for Internet access via any personal computer with an Ethernet card.

Telephones
There are several telephones in the dormitory on which you can receive calls. You and your parents will receive a list of these phone numbers in future mailings.

Although many students choose to bring cell phones, you may make outgoing collect or charge calls on the public campus phones or in the lobby of the residence hall. Receiving collect calls is strictly prohibited.
There will be a TTY phone in the dormitory for student and staff use.

You and your family should feel free to contact the program anytime you have questions or need assistance. Contact information is listed in the "Who's Who" section of this handbook.

**Non-Residential Students**
Not all SEARCH participants live in residence. Each year, a few students commute to the program from nearby towns. These students participate fully in all of the daytime activities, and often take part in evening activities. In addition, we encourage non-residential students to take part in weekend events and trips.

**WHAT TO BRING**

**Clothing**
Summer weather in New England is quite unpredictable. As the old saying goes, "If you don't like the weather, wait a minute. It will change!" There will be some hot, muggy days when sundresses or shorts will be desirable. There will also be cool, damp weather. Therefore, we advise you to bring along a warm sweater, light jacket, and umbrella.

Dress is informal. Comfort and convenience are the primary considerations. Bring what you most prefer to wear, whether it’s blue jeans, shorts or sundresses. Casual dress is appropriate for classes, meals, and weekend trips alike.

Bring clothes suitable for picnicking, hiking and playing sports. And don’t forget a bathrobe and slippers! You may also want to bring some plastic flip-flops for the shower.

You might want to consider labeling your clothes.

**Money**
You will need a small amount of spending money. Traveler’s checks are usually the safest and easiest way to go. Traveler’s checks and personal checks for small amounts (limit of $25.00) can be cashed at the local bank within walking distance from the college. The closest Western Union office is at Food Mart in South Hadley. (Not within walking distance). Extra expenses might include:

- snacks
- movies
- souvenirs
- toiletries
- laundry

This is a very basic list. Needs vary from person to person. It is not necessary to spend a great deal of money at SEARCH, but it is possible. Budgeting might be part of your education this summer.

**Money you will need!**
*Key card/ key deposit: $25.00 (necessary for dormitory check-in)*
Other Useful Items
You may wish to bring the following items with you to make life more comfortable. If you forget things, you can usually purchase them here without difficulty.

ALARM CLOCK       laundry bag
sunglasses          tape, scissors, thumb tacks
rug                 paper, pencils, pens
camera              toiletries, soap dish
hairdryer           musical instruments
radio or stereo     room decorations/posters
FAN strongly recommended! bicycle and lock
hangers             hiking shoes or boots
sewing kit          tennis, racquetball or squash racket
umbrella            running shoes
desk lamp           softball glove, softball, bat
extension cord      soccerball, basketball, frisbee
night light         swim suit
jacket (it does get cool!) plastic flip-flops
photos of family and friends

telephone (Please be advised that Mount Holyoke College is phasing out phone service so only some rooms will have a usable jack.)

recipes, readings, items for sharing on Community Day

special health needs (such as allergy medicine, etc.)

SERVICES

Bookstores
You can purchase supplies (like paper, pencils, stationery) and Mount Holyoke souvenirs (postcards, t-shirts, posters, etc.) at the Mount Holyoke College Campus Store in the Blanchard Campus Center. The store is open Monday through Friday from 11:00 am to 3:00 pm. The Odyssey Book Shop, which has a long-standing reputation as one of the best bookstores in the Pioneer Valley and is the official college book store, is located in The Village Commons, directly across the street from the College and just a block up the street from Pearsons Hall.

Other Stores
There are several restaurants and shops at The Village Commons where you can get sandwiches, pizza or ice cream, have your hair cut, catch a movie, or pick up a birthday card or small gift.
Health Services
All SEARCH students are enrolled in the University Health Service at the University of Massachusetts Amherst. The University Health Service is a well-equipped facility which can handle all health care needs except hospitalization. SEARCH tuition covers the cost of emergency visits to the health center. Parents must provide insurance to cover the cost of non-emergency visits and of hospital stays. Students who need to be examined or treated by a physician will be transported to the University Health Service by a SEARCH staff member.

Students who feel too ill to attend class must check in with their RA, the Assistant Head Resident, and/or the Head Resident.

Public Safety
The Public Safety force at Mount Holyoke College is on duty 24 hours a day. The Office of Public Safety is available at any time of the day or night at extension 1-911. (If you're calling from off-campus, dial 413-538-2304.) In addition, there are several emergency telephones located across campus. (They are illuminated with a blue light.) Upon lifting the receiver of one of these phones, you will be connected automatically with the Public Safety dispatcher.

I WISH I HAD KNOWN THAT...

Massachusetts has bottle and can recycling; you get a 5-cent refund when you return an empty soft drink container.

the distance around Upper Lake is one mile, and the distance around Lower Lake is one-half mile. (Attn: Runners and Walkers!)

asking questions is the best way to get answers!

having a fan can be very nice....some might say necessary!

there are many colleges to visit near Mount Holyoke.

each student is responsible for what happens in her dorm room.

if you send mail, it's more likely that you will get mail!

the South Hadley Post Office is just a short walk from the residence hall.

roommates don't have to be "best friends."

carrying your room key and key card is essential: “Don't leave home without it!”

the dorm has fire drills when you least expect them.

everyone loses computer files sometimes, and everyone feels discouraged when this happens.

students will be asked to explain their thinking every day in classes.

casual dress at SEARCH is the customary style.

talking to someone about your problems is not an admission of weakness, but rather a sign of strength.

no grades are given at SEARCH. Each student will receive written feedback from each of her teachers after the program ends.

you will be asked to tell us what you liked and didn't like about your SEARCH experience --- but you don't have to wait until the end of the program to let us know!
WHO'S WHO

Following is a list of people who can assist you with your questions or concerns. When you arrive, you will meet your Head Resident and the Residence Assistants who will be valuable resources to you throughout the summer. As the summer progresses, you will get to know the rest of the SEARCH staff, all of whom are willing to help you.

Char & Jim Morrow, Directors
Office: 413-538-2069 (Char); 413-538-2820 (Jim)
Cell: 413-896-4548 (Char) 413-536-0788 (Jim)
E-Mail: cmorrow@mtholyoke.edu
jmorrow@mtholyoke.edu

Ellen Ferris, Summer Programs Coordinator
Office: 413-538-2608
E-Mail: eferris@mtholyoke.edu

COMMUNITY RESPONSIBILITIES

At SEARCH, you have become part of an exciting, diverse community. Being a member of this community is a privilege; sharing in the maintenance of this community is a responsibility. We would like to share with you the things that will make the SEARCH community a success.

Our community is committed to celebrating diversity. Each member of this SEARCH community is expected to respect the rights, opinions, feelings, and beliefs of others. Mistreating others based on their race, color, religion, ethnic backgrounds, sex, age, sexual orientation, or physical or mental handicap will not be tolerated and could result in dismissal from the SEARCH community.

Our community is a place where the expression of ideas and opinions is welcomed. We firmly believe in freedom of speech, including the responsibility of communicating with one another in a respectful way. We encourage dialogue and learning from one another. We do not tolerate verbally abusing, threatening, or physically hurting another person, nor destroying property as a means of expressing oneself. These behaviors could result in dismissal from the SEARCH program.

We expect members of the community to respect themselves as well as others. It is challenging to become a more active learner and to take risks in the learning process. We are all working on becoming more self-confident together. Both in classes and in residence we expect a healthy balance between challenging oneself and others and maintaining a respectful relationship.

We are confident that you will join us in creating a community in which we can all learn, grow, feel comfortable, take risks, and be proud.

SPECIFIC ACADEMIC EXPECTATIONS

1. You must attend all classes and the afternoon recreation program. Exceptions for extenuating circumstances, such as a trip to the health center, can be granted by the Head Resident (HR), Assistant Head Resident (AHR), or Program Directors. No excused absences will be granted without your having notified one of the above-named people.

2. Two unexcused absences will result in your having a conversation with the Program Directors. Upon three unexcused absences your family will be called.

3. No visitors are allowed in class without prior permission of the instructor.

4. Internet and e-mail use is not permitted during class time unless authorized by the instructor.
SPECIFIC RESIDENTIAL EXPECTATIONS

1. Students are expected to work at maintaining a positive atmosphere with a roommate over the course of four weeks. Getting along with roommates and others with whom you live in close quarters takes time. Ask people with experience to help you.

2. Each Residential Assistant (RA) is responsible for encouraging, supporting, and helping the SEARCH students. Each student must inform her RA about what activity she will be doing each evening. Any time you leave the residence hall after dark, you should ask another student to accompany you.

3. Anytime you intend to leave campus, you must tell your RA where you are going and with whom. If you are leaving in a car with someone who is not a SEARCH staff member, you must have permission to do so, and you must have a staff member meet the person with whom you are leaving.

4. Students with permission to leave campus for a weekend with a specific individual named by parents may leave after 2:15 pm Friday. A student who is leaving for the weekend must sign out with the Head Resident and with her RA.

5. The dormitory closes at 10:30 pm Sunday through Thursday and at 11:30 pm Friday and Saturday. Students must be in the dorm by closing time. All common areas close 1/2 hour after dorm closing time. At this time, students should be in their rooms and quiet. Quiet hours will be in effect until 7:00 am. If a student is not in the dorm at closing time, she must use the emergency phone outside of the dorm door to contact an RA or HR, or contact the Security Office and the officer on duty will contact the HR.

6. There are usually several activities to choose from, some scheduled in advance and some spontaneous. Watch for postings of events.

7. Possession, use, or sale of illegal drugs or alcohol is strictly prohibited.

8. Student rooms should be kept in a healthful condition.

9. Smoking is not permitted inside any campus building. It is of utmost importance for everyone’s safety that students never smoke in dormitory rooms.

10. No guests other than parents, guardians, staff, or SEARCH participants will be allowed in the dormitory rooms without permission of the RA, AHR, or HR.

11. We expect all students to follow the guidelines for e-mail and Internet use specified by Computing Services. In addition no one should compromise the safety or privacy of other community members by giving out the location or phone numbers of SEARCH over the Internet.

The SEARCH staff would like for you to have a successful and healthful experience this summer. If you need help, advice, or you just want to talk, there are many staff members to whom you can turn.
DIRECTIONS TO MOUNT HOLYOKE COLLEGE

From the South
Travel north on Route 91, exit at Route 202N (Holyoke-South Hadley, exit 16). Proceed on 202N through Holyoke and across the Connecticut River. Take the second exit marked South Hadley Center - Amherst to Route 116 North. The college is approximately 2.5 miles from this exit. Make a right onto Gateway Road through the College Gates. Our dormitory, Porter Hall, is on the righhand side of the street diagonally across from the Ampitheater, about two blocks down just before Gateway Road turns sharply left.

From the North
Travel south on Route 91, exit at Route 141 (Holyoke-South Hadley, exit 17). Proceed east on Route 141 until it intersects with Route 202. Make a left onto 202N and follow same directions as from the South.

From the East on the Massachusetts Turnpike
Take exit 5 (Holyoke-Chicopee). After the toll booth, bear right to “South Hadley.” At the bottom of the ramp, turn left onto Route 33 and travel for approximately five miles to Route 116. Turn right onto Route 116N and drive 1.5 miles. Make a right onto Gateway Road through the College Gates. Our dormitory, Porter Hall, is on the righhand side of the street diagonally across from the Ampitheater, about two blocks down just before Gateway Road turns sharply left.

From the West on the Massachusetts Turnpike
Take exit 4 (Route 91) and follow the signs for 91 North (Holyoke). Then, follow the directions above entitled “From the South.”

Students should arrive and be ready to start the program by 1:00 pm, Sunday, June 29.

SummerMath/SEARCH staff will meet students only at Bradley International Airport ( Hartford, CT/ Springfield, MA), or the bus or train station in Springfield, MA, and only by prior arrangement. In order to be met at the airport, bus, or train station by a staff member, you must let us know your arrival plans in advance.