TEACHER QUESTIONNAIRE
Advanced Placement Program® Study
AP® Calculus AB

The College Board Advanced Placement Program is conducting an important study to identify factors that enhance the success of under-represented minority (African American and Hispanic) students in AP courses. The study is being conducted by Educational Testing Service ® (ETS®).

Your school has been identified as serving a significant number of African American and Hispanic students in AP Calculus AB and/or AP English Literature and Composition. We are extremely interested in learning more about the teaching in these courses and about you as the AP teacher. In this questionnaire, you will be asked some background questions and about instruction in your AP classes.

Only you can provide information about the instruction your students receive, and your answers are very important. The information you provide is being collected for research purposes only and will be kept strictly confidential. Although you are very busy, we urge you to complete this questionnaire as accurately as possible. Your responses to these questions are needed to help us identify and communicate ways to improve preparation, recruitment, and instruction of under-represented minority students in AP.

Instructions

This questionnaire contains four parts:

A. Teacher Background Information
B. Mathematics Preparation
C. Mathematics Instruction Information
D. Policies and Practices for AP

Please complete all parts of the questionnaire and record your answers directly on the questionnaire by providing the information requested as it applies to you/your classes. You will also find class rosters with each student in your school who took the AP Calculus AB exam in 1997 and 1998. Please provide the information requested for your students according to the instructions attached to the roster. Please call Barbara Bruschi at (609) 734-5943 (bbruschi@ets.org) or Mario Yepes-Baraya at (609) 734-5357 (myepes@ets.org) with any questions.

Please return your completed questionnaire and your class rosters to your PRINCIPAL in the envelope provided. The Principal is collecting all surveys to be returned to ETS by April 23.

THANK YOU VERY MUCH.
A. Background, Education, and Resources

A1. What is your gender? (Circle one.)
   a. Male
   b. Female

A2. Which best describes you? (Circle one.)
   a. American Indian or Alaskan Native
   b. Asian or Pacific Islander
   c. Black/African American (non-Hispanic)
   d. Hispanic (regardless of race)
   e. White (non-Hispanic)
   f. Other (Specify): ________________

A3. In which of the following years did you teach AP Calculus AB? (Circle all that apply.)
   a. 1998-99
   b. 1997-98
   c. 1996-97
   d. I no longer teach AP course(s).

A4. Counting this year, how many years in total (including part-time teaching) have you taught high school mathematics? (Circle one.)
   a. 2 years or less
   b. 3-5 years
   c. 6-10 years
   d. 11-24 years
   e. 25 years or more

A5. Counting this year, how many years have you taught AP Calculus AB? (Circle one.)
   a. 2 years or less
   b. 3-5 years
   c. 6-10 years
   d. 11-24 years
   e. 25 years or more
A6. What type of teaching certificate in mathematics do you have in your state? (Circle one.)
   a. Permanent certificate
   b. Advanced professional certificate
   c. Temporary, provisional, or emergency state certificate
   d. I do not have a certificate in mathematics.
   e. Other (Specify): __________________________

A7. What is the highest academic degree you hold? (Circle one.)
   a. Bachelor's degree
   b. Master's degree
   c. Education specialist or professional diploma based on at least one year's work past master's degree
   d. Doctorate
   e. Professional degree (e.g., M.D., LL.B., J.D., D.D.S.)

A8. When was your most recent degree awarded? (Circle one.)
   a. Within the last year
   b. 2-4 years ago
   c. 5-10 years ago
   d. 11-20 years ago
   e. 21 years ago or more

A9. What were your undergraduate major and minor fields of study? (Check each box that applies.)

<table>
<thead>
<tr>
<th>Major</th>
<th>Minor</th>
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</thead>
<tbody>
<tr>
<td>a. Mathematics, Physical Sciences, Computer Science, or Engineering</td>
<td>□</td>
</tr>
<tr>
<td>b. Mathematics Education</td>
<td>□</td>
</tr>
<tr>
<td>c. Science Education</td>
<td>□</td>
</tr>
<tr>
<td>d. Education (including elementary, secondary, special, bilingual or ESL, counseling)</td>
<td>□</td>
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<tr>
<td>e. Other area related to teaching mathematics (Specify):</td>
<td>□</td>
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<tr>
<td>f. All other (Specify):</td>
<td>□</td>
</tr>
</tbody>
</table>
A10. What were your graduate major fields of study? (Check one box for each graduate degree.)

<table>
<thead>
<tr>
<th>Degree 1</th>
<th>Degree 2</th>
<th>Degree 3</th>
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</thead>
<tbody>
<tr>
<td>a. No graduate level study ☐</td>
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<tr>
<td>b. Mathematics, Physical Sciences, Computer Sciences or Engineering ☐ ☐ ☐</td>
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<td></td>
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<tr>
<td>c. Mathematics Education ☐ ☐ ☐</td>
<td></td>
<td></td>
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<tr>
<td>d. Science Education ☐ ☐ ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Education (elementary, secondary, special bilingual or ESL, counseling) ☐ ☐ ☐</td>
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<td></td>
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<tr>
<td>f. Other area related to teaching mathematics (Specify): ☐ ☐ ☐</td>
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<tr>
<td>g. All other (Specify): ☐ ☐ ☐</td>
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</tbody>
</table>

A11. How often do you attend AP workshops? (Circle one.)

a. Once or twice a year
b. Every 2 or 3 years
c. Every 4 or 5 years
d. Infrequently (6 or more years)
e. I have never attended an AP workshop.

A12. How often do you attend AP summer institutes? (Circle one.)

a. Once a year
b. Every 2 or 3 years
c. Every 4 or 5 years
d. Infrequently (6 or more years)
e. I have never attended an AP summer institute.

A13. When did you last attend an AP summer institute? (Circle one.)

a. Within the last year
b. 2 to 4 years ago
c. 5 years ago or more
d. I have never attended an AP summer institute.
A14. What type of support is provided for you to participate in the following? (Circle all that apply.)

**AP workshop**
- a. None
- b. Released time
- c. Fee for workshop
- d. Expenses for workshops
- e. Other (Specify): ____________________

**AP summer institute**
- f. None
- g. Released time
- h. Fee for institute
- i. Expenses for institute
- j. Other (Specify): ____________________

A15. Which of the following statements is true about the extent to which your school provides you with the instructional materials and other resources you need to teach your AP class(es)? (Circle one.)

- a. I get all the resources that I need.
- b. I get most of the resources that I need.
- c. I get some of the resources that I need.
- d. I don’t get any of the resources that I need.

A16. How often do you incur out-of-pocket costs for instructional materials and other resources for your AP class(es)? (Circle one.)

- a. Weekly
- b. Monthly
- c. Three or four times each year
- d. Once or twice each year
- e. Hardly ever or never

A17. Which of the following resource people do you find useful to you in teaching your AP Calculus AB class(es)? (Circle all that apply.)

- a. Other AP teacher(s)
- b. Other teacher(s)
- c. Department chair
- d. Principal
- e. District curriculum specialist
- f. Other (Specify): ____________________
- g. None
A18. Which, if any, of the following technology do you use in school to prepare to teach your AP class/es)? (Circle all that apply.)
   a. I do not have access to a computer.
   b. I do not have access to a computer in school.
   c. E-mail
   d. AP listserves
   e. Chatrooms
   f. Internet/World-wide webs
   g. Other (Specify): _______________________
   h. None

A19. How many school hours per week do you currently have designated as in-school preparation time for your AP class/es)? (Circle one.)
   a. None
   b. Preparation time for AP class/es) part of overall preparation time
   c. Less than 1 hour
   d. 1-2 hours
   e. 3-4 hours
   f. 5 hours or more

A20. How many additional hours do you currently spend outside of school on preparation for your AP class/es) per week? (Circle one.)
   a. None
   b. Less than 1 hour
   c. 1-2 hours
   d. 3-4 hours
   e. 5 hours or more

A21. Are you involved in team teaching in your AP course/s)? (Circle one.)
   a. No
   b. Yes

A22. Are you involved in joint preparation time with another teacher teaching Calculus in your school? (Circle one.)
   a. No
   b. Yes
B. Mathematics Preparation

B1. What level of academic preparation have you had in each of the following mathematics topics or areas? (Check all that apply for each letter below.)

<table>
<thead>
<tr>
<th></th>
<th>Little or No Academic Preparation</th>
<th>Part of a College or University Course</th>
<th>One or More College or University Courses</th>
<th>Professional Development Workshops or Seminars</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. College algebra</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>B. Single variable calculus</td>
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<td>[ ]</td>
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<tr>
<td>C. Multivariable calculus</td>
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<td>D. Differential equations</td>
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<td>[ ]</td>
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<tr>
<td>E. Linear algebra</td>
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<td>[ ]</td>
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<tr>
<td>F. Discrete mathematics</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td>G. College geometry/ non-Euclidean geometry</td>
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<tr>
<td>H. Abstract algebra</td>
<td>[ ]</td>
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<td>[ ]</td>
</tr>
<tr>
<td>I. Probability</td>
<td>[ ]</td>
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<tr>
<td>J. Statistics</td>
<td>[ ]</td>
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<tr>
<td>K. Introductory real analysis</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td>L. History of mathematics</td>
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</tr>
</tbody>
</table>

B2. During the last three years, what have you done to improve your academic preparation in mathematics? (Circle all that apply.)

a. No formal workshops or courses
b. One workshop or seminar
c. Multiple workshops or seminars
d. One university course
e. Multiple university courses

B3. During the last three years, in which of the following areas have you taken courses or participated in professional development activities? (Circle all that apply.)

a. Use of telecommunications
b. Use of computers
c. Use of calculators in secondary school mathematics
d. Use of computers in secondary school mathematics
e. Methods of teaching secondary school mathematics
f. Cooperative group instruction
g. Interdisciplinary instruction
h. Teaching higher-order thinking skills
i. Classroom management and organization
j. Problem solving in secondary mathematics
k. Understanding students' thinking about mathematics

(continued on next page)
l. Testing, student assessment, or evaluation
m. Portfolio Assessment
n. Performance-based assessment
o. Teaching students from different cultural backgrounds
p. Teaching students who are Limited English Proficient
q. Teaching students with disabilities
r. Gender issues in teaching mathematics
s. Other professional issues (Specify): ________________________________
t. I have not participated in professional development activities or coursework.

B4. What type of support is provided for teachers to participation in non-AP workshops or seminars? (Circle all that apply.)

a. None
b. Released time
c. Fee for workshop or seminar
d. Expenses for workshop or seminar
e. Other (Specify): ________________________________

B5. How prepared did you feel when you first started to teach AP Calculus AB course(s)? (Circle one letter for each section below.)

Knowledge of Subject                    Knowledge of AP Program and Exam

a. Very well prepared                      e. Very well prepared
b. Well prepared                           f. Well prepared
c. Somewhat prepared                       g. Somewhat prepared
 d. Not prepared                           h. Not prepared

B6. How prepared do you feel now to teach your AP Calculus AB course(s)? (Circle one letter for each section below.)

Knowledge of Subject                    Knowledge of AP Program Exam

a. Very well prepared                        e. Very well prepared
b. Well prepared                             f. Well prepared
c. Somewhat prepared                        g. Somewhat prepared
d. Not prepared                             h. Not prepared

B7. How closely aligned do you feel the AP Calculus AB curriculum provided by the AP Program is with the curriculum standards used in your department/school/district/state? (Circle one.)

a. Not aligned
b. Somewhat aligned
 c. Closely aligned
d. Very closely aligned
e. There are no formal curriculum standards.
C. AP Mathematics Instruction Information

Please answer these questions about the AP Calculus AB class(es) that you teach.

C1. How many hours of instructional time do you have to present the complete AP Calculus AB curriculum? ______ hours per week for ______ weeks

C2. On average, how much time do you expect students in each class to spend on assignments outside of the classroom per week? ______

C3. Over the academic year, how much emphasis have you given to each of the following in your AP Calculus AB class(es)? (Check one box for each letter below.)

<table>
<thead>
<tr>
<th>Topics</th>
<th>Functions:</th>
<th>Little or No Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Analysis of graphs</td>
<td>☐ ☐ ☐</td>
<td></td>
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<tr>
<td>b.</td>
<td>Limits of functions</td>
<td>☐ ☐ ☐</td>
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<tr>
<td>c.</td>
<td>Asymptotic unbounded behavior</td>
<td>☐ ☐ ☐</td>
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<tr>
<td>d.</td>
<td>Continuity as a property of functions</td>
<td>☐ ☐ ☐</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Derivatives:</th>
<th>Little or No Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.</td>
<td>Concept of a derivative</td>
<td>☐ ☐ ☐</td>
<td></td>
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<tr>
<td>f.</td>
<td>Derivative at a point</td>
<td>☐ ☐ ☐</td>
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<tr>
<td>g.</td>
<td>Derivative as a function</td>
<td>☐ ☐ ☐</td>
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</tr>
<tr>
<td>h.</td>
<td>Second derivatives</td>
<td>☐ ☐ ☐</td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>Applications of derivatives</td>
<td>☐ ☐ ☐</td>
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<tr>
<td>j.</td>
<td>Computation of derivatives</td>
<td>☐ ☐ ☐</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Integrals:</th>
<th>Little or No Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>k.</td>
<td>Riemann sums</td>
<td>☐ ☐ ☐</td>
<td></td>
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<tr>
<td>l.</td>
<td>Interpretations and properties of definite integrals</td>
<td>☐ ☐ ☐</td>
<td></td>
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<tr>
<td>m.</td>
<td>Applications of integrals</td>
<td>☐ ☐ ☐</td>
<td></td>
</tr>
<tr>
<td>n.</td>
<td>Fundamental Theorem of Calculus</td>
<td>☐ ☐ ☐</td>
<td></td>
</tr>
<tr>
<td>o.</td>
<td>Techniques of antidifferentiation</td>
<td>☐ ☐ ☐</td>
<td></td>
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<tr>
<td>p.</td>
<td>Applications of antidifferentiation</td>
<td>☐ ☐ ☐</td>
<td></td>
</tr>
<tr>
<td>q.</td>
<td>Numerical approximations to definite integrals</td>
<td>☐ ☐ ☐</td>
<td></td>
</tr>
</tbody>
</table>
Skills:

<table>
<thead>
<tr>
<th></th>
<th>Little or No Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>r.</td>
<td>Learning mathematical facts and concepts</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>s.</td>
<td>Learning skills and procedures needed to solve routine problems</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
t. | Exploring functions using multiple representations | ☐ | ☐ | ☐ |
u. | Developing reasoning and analytical ability to solve unique problems | ☐ | ☐ | ☐ |
v. | Learning how to communicate ideas in mathematics effectively | ☐ | ☐ | ☐ |
w. | Data exploration and analysis | ☐ | ☐ | ☐ |
x. | Building and applying mathematical models | ☐ | ☐ | ☐ |

C4. In your AP Calculus AB instruction, how often do you do each of the following? (Check one box for each letter below.)

<table>
<thead>
<tr>
<th></th>
<th>Never or Hardly Ever</th>
<th>Once or Twice a Month</th>
<th>Once or Twice a Week</th>
<th>Almost Every Day</th>
</tr>
</thead>
</table>
a. | Use mathematical modeling as the principal strategy for learning precalculus material | ☐ | ☐ | ☐ | ☐ |
b. | Use problem solving as a means of investigating important mathematical concepts | ☐ | ☐ | ☐ | ☐ |
c. | Promote student interaction and discussion using inquiry-based techniques | ☐ | ☐ | ☐ | ☐ |
d. | Use students' interests and background experiences to make connections to mathematics | ☐ | ☐ | ☐ | ☐ |
e. | Develop students' ability to make connections among mathematical topics | ☐ | ☐ | ☐ | ☐ |
f. | Develop students' ability to make connections between mathematics and other disciplines | ☐ | ☐ | ☐ | ☐ |
g. | Use the results of classroom assessments to inform instructional decisions | ☐ | ☐ | ☐ | ☐ |
C5. How often have students in your AP class done each of the following? (Check one box for each letter below.)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never or Hardly Ever</th>
<th>Once or Twice a Month</th>
<th>Once or Twice a Week</th>
<th>Almost Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Done mathematics problems from their text books</td>
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<td></td>
</tr>
<tr>
<td>b. Done mathematics problems from supplementary materials</td>
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<tr>
<td>c. Worked with physical models or manipulatives</td>
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<tr>
<td>d. Used a graphing calculator</td>
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<tr>
<td>e. Used a computer</td>
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<tr>
<td>f. Taken mathematics quizzes or tests</td>
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<tr>
<td>g. Taken some alternative assessment</td>
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<tr>
<td>h. Been asked to apply mathematical knowledge to real world situations</td>
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<tr>
<td>i. Worked in pairs or small groups to solve mathematical problems</td>
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<tr>
<td>j. Written a few sentences about a mathematics problem or its solution</td>
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<tr>
<td>k. Presented their mathematical work to the class</td>
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<tr>
<td>l. Written reports or done mathematical projects</td>
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</tbody>
</table>

C6. In your AP Calculus AB class, how much emphasis do you place on your students doing each of the following? (Check one box for each letter below.)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Little or No Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Working together to make sense of mathematics</td>
<td></td>
<td></td>
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<tr>
<td>b. Taking the initiative to check their work</td>
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<tr>
<td>c. Thinking about what a problem means and ways in which it might be solved</td>
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<tr>
<td>d. Inventing and solving their own problems</td>
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<td></td>
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<tr>
<td>e. Applying mathematics to real-life problems</td>
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</tbody>
</table>

C7. Do you permit students in your AP class(es) to use graphing calculators for quizzes and tests? (Circle one.)

a. No
b. Yes, for all tests and quizzes
c. Yes, for some tests and quizzes
C8. Which best describes the availability of graphing calculators for use by students in your class(es)? (Circle one.)

a. No graphing calculators are available.
b. One within the classroom
c. Fewer than six in the classroom
d. A complete class set is available for use by all students.
e. Some students have their own graphing calculators.
f. Most students have their own graphing calculator.
g. All students have their own graphing calculator.

C9. What is the primary use of graphing calculators in your AP class(es)? (Circle one.)

a. I do not use graphing calculators for instruction.
b. Calculating numerical answers
c. Graphing functions
d. Spreadsheets or tables
e. Statistical graphs
f. Symbolic manipulations
g. Estimation

C10. Which best describes the availability of computers for use by students in your class(es)? (Circle one.)

a. No computers are available.
b. One within the classroom
c. Two or three within the classroom
d. Four or more within the classroom
e. Available in a computer laboratory but difficult to access or schedule
f. Available in a computer laboratory and easy to access or schedule
g. All students have their own computer.

C11. What is your primary use of computers for mathematical instruction? (Circle one.)

a. I do not use computers for instruction.
b. Calculating numerical answers
c. Graphing functions
d. Spreadsheets or tables
e. Statistical graphs
f. Symbolic manipulations
g. Estimation
C12. How often do you use each of the following to assess students’ progress in your AP Calculus AB class(es)? (Check one box for each letter below.)

<table>
<thead>
<tr>
<th></th>
<th>Never or</th>
<th>Once or</th>
<th>Once or</th>
<th>Once or</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hardly</td>
<td>Twice</td>
<td>Twice</td>
<td>Twice</td>
</tr>
<tr>
<td></td>
<td>Ever</td>
<td>a Year</td>
<td>a Month</td>
<td>a Week</td>
</tr>
</tbody>
</table>

a. In-class exams
b. Take-home exams
c. Individual or group projects or presentations
d. Portfolio collections of each student’s work
e. Multiple choice tests
f. In-class participation in discussion
g. Problem sets
h. Written solutions and explanations on task sets

C13. How often do you provide each of the following types of feedback to students? (Check one box for each letter below.)

<table>
<thead>
<tr>
<th></th>
<th>Never or</th>
<th>Monthly</th>
<th>Bi-Weekly</th>
<th>Weekly</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hardly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ever</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Letter grade
b. Written comments
c. Verbal comments
d. Other (Specify):

C14. How do you communicate students’ progress to parents? (Circle all that apply.)

a. Formal mid-term progress report
b. Report card
c. Parent-Teacher conference initiated by teacher
d. Parent-Teacher conference initiated by parent (or student)
e. Written note
f. Phone call
g. Other (Specify): ______________________
C15. How confident do you feel about each of the following? (Check one box for each letter below.)

a. Teaching AP Calculus course skills
   Relatively Little or Somewhat Very
   No Confidence Confident Confident

b. Communicating AP mathematical content skills to students with different levels of mathematical preparation

   □ □ □

c. Using a wide variety of course-related instructional methods

   □ □ □

d. Using course-related technology to teach mathematical concepts (e.g., graphing calculators, computers)

   □ □ □

C16. In your opinion, how effective was your AP Calculus AB course in doing each of the following? (Check one box for each letter below.)

a. Increasing students' general interest and motivation in learning mathematics

   □ □ □ □ □

b. Increasing students' verbal communication skills in mathematics

   □ □ □ □ □

c. Increasing students' writing skills in mathematics

   □ □ □ □ □

d. Preparing students for a college calculus course

   □ □ □ □ □

e. Increasing students' confidence in mathematics

   □ □ □ □ □

f. Increasing students' confidence about attending college

   □ □ □ □ □

D. Policies and Practices for AP

D1. Which of the following are considered when recruiting new AP teachers? (Circle all that apply.)

   a. Teacher interest
   b. Teacher's schedule availability
   c. Degree in the subject area
   d. Experience in the subject area
   e. Other (Specify): __________________________
D2. Who was involved in your selection to teach AP Calculus AB? (Circle all that apply.)

a. Principal decision
b. Teacher initiated
c. Department chair recommended
d. Another teacher recommended
e. Other (Specify): _______________________

D3. For the student body as a whole, how would you characterize each of the following within your school? (Indicate the percent in each category for each letter below.)

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Students’ academic background upon arrival in high school</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>b. Students’ attitude toward academic achievement in general</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>c. Students’ regard for school property</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>d. Students’ aspirations to attend college</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>e. Academic preparation of students who take AP classes</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>f. Parents’ level of education</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>g. Parents’ support for student achievement</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>h. Parents’ understanding/ support of AP</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>i. Preliminary courses provided by school to prepare students for AP</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

D4. For African American and Hispanic students, how would you characterize each of the following within your school? (Indicate the percent in each category for each letter below.)

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Students’ academic background upon arrival in high school</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>b. Students’ attitude toward academic achievement in general</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>c. Students’ regard for school property</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>d. Students’ aspirations to attend college</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
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<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>f. Parents’ level of education</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>g. Parents’ support for student achievement</td>
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<td>%</td>
<td>%</td>
<td>%</td>
</tr>
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<td>h. Parents’ understanding/ support of AP</td>
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<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>i. Preliminary courses provided by school to prepare students for AP</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>
D5. Indicate which, if any, of the following policies, practices or strategies are used at your school to prepare prospective students to succeed in AP. (Circle all that apply.)

a. No specific preparation
b. Students complete a specified course sequence in a given subject matter
c. Students complete an honors course(s)
d. Students attend preparatory summer workshop or course
e. Other (Specify): ____________________________

D6. How are teachers in your school made aware of AP course offerings and requirements? (Circle all that apply.)

a. AP teacher(s)
b. Other teacher(s)
c. Principal
d. Formal in-service
e. Other (Specify): ____________________________

D7. About which of the following do you communicate with other teachers teaching 9th, 10th, and 11th grade students? (Circle all that apply.)

a. AP Program offerings
b. Student skills necessary for AP Program/courses
c. Identifying promising students for AP courses
d. Identifying promising African American and Hispanic students for AP courses
e. None of the above

D8. How do you make students aware of the AP course offerings? (Circle all that apply.)

a. Speak with students in my classes
b. Speak with students in other classes
c. Speak about the AP Program as part of a student assembly
d. Speak about the AP Program as part of a parents’ back to school night/assembly
e. Mailings/Newsletters to students
f. Mailings/Newsletters to parents
g. Other (Specify): ____________________________

D9. Are there any special efforts you use to make African American and Hispanic students aware of the AP course offerings and requirements? (Circle one.)

a. No
b. Yes (Briefly describe): ____________________________

Use space at the end of the questionnaire for any additional comments.
D10. Are there any special efforts you use to attract or recruit *African American and Hispanic students* to AP courses? (Circle one.)

a. No
b. Yes (Briefly describe): 

Use space at the end of the questionnaire for any additional comments.

D11. In your experience, which of the following are the major factors that consistently help you to identify students who will succeed in AP Calculus AB? (Circle all that apply.)

a. Grades
b. Teacher recommendations
c. PSAT scores
d. Other standardized test scores
e. Student interest
f. Parent interest
g. Previous courses taken
h. Special honors courses taken
i. Writing sample
j. Interview
k. Other (Specify): 

D12. Specify two of the factors listed above that you consider **most important**. (Circle two letters below.)

a b c d e f g h i j k

D13. In your experience, which of the following are the major factors that consistently help you to identify *African American and Hispanic students* who will succeed in AP Calculus AB? (Circle all that apply.)

a. Grades
b. Teacher recommendations
c. PSAT scores
d. Other standardized test scores
e. Student interest
f. Parent interest
g. Previous courses taken
h. Special honors courses taken
i. Writing sample
j. Interview
k. Other (Specify): 

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D14. Specify two of the factors listed above that you consider **most important**. (Circle two letters below.)

a b c d e f g h i j k

D15. Do you use any special methods to select *African American and Hispanic students* for your AP course(s)? (Circle one.)

a. No  
b. Yes (Briefly describe): ____________________________  
Use space at the end of the questionnaire for additional comments.

D16. What have been the trends over the last three years with regard to *students in general* in your AP Calculus AB class(es)? (Check one box for each letter below.)

<table>
<thead>
<tr>
<th>Decreased</th>
<th>Not Changed</th>
<th>Increased</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Number of student inquiries about your AP class(es)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Number of students enrolling in your AP class(es)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Number of students dropping out of your AP class(es)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D17. What have been the trends over the last three years with regard to *African American and Hispanic students* in your AP Calculus AB class(es)? (Check one box for each letter below.)

<table>
<thead>
<tr>
<th>Decreased</th>
<th>Not Changed</th>
<th>Increased</th>
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</tr>
<tr>
<td>c. Number of students dropping out of your AP class(es)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
D18. What, if any, academic support outside of class do you offer to students taking your AP course(s)? (Circle all that apply).

a. None outside of class time
b. One-to-one tutoring by AP teacher
c. Group tutoring by AP Teacher
d. Tutoring by another mathematics teacher
e. Peer tutoring
f. Student study groups
g. Other (Specify): ________________________________

D19. What is done in your class to prepare students for the AP examination? (Circle all that apply.)

a. Preparation time during regular course work
b. Complete course work one to two months early and use the remainder of the time for preparation for the exam
c. Use sample AP exam questions throughout the school year
d. Administer one or more practice tests before the exam date
e. Other (Specify): ________________________________

D20. Describe any particularly effective strategies you use to motivate *African American and Hispanic* students in your AP class(es).

D21. Describe any intervention strategies you have found particularly effective in helping *African American and Hispanic students* persist in your AP class(es).

D22. Describe any strategies you have found particularly effective in helping *African American and Hispanic students* succeed in your AP class(es).
D23. Which best describes your practice regarding students taking the AP examination? (Circle one)
   a. I encourage those students I feel likely to get a 3 or higher to take the exam.
   b. I leave the decision to the student.
   c. All students in the class take the AP examination.
   d. Other (Specify): ________________________________

D24. How important is each of the following student outcomes in terms of your goals for students taking your AP class(es)? (Check one box for each letter below.)

   a. Student earns a score of 3 or better on the AP examination
   b. Student experiences college-level work
   c. Student builds confidence in subject area
   d. Student becomes more interested in subject area
   e. Student’s chances of college admission are improved
   f. Student gains confidence that they can succeed in college
   g. Other (Specify):

D25. Describe any changes you would like to see in your school’s policies or practices regarding AP that you feel would improve your effectiveness in teaching African American and Hispanic students.

Additional Comments:

PLEASE RETURN THE QUESTIONNAIRE IN THE ENVELOPE PROVIDED TO YOUR PRINCIPAL FOR RETURN MAILING TO ETS. THANK YOU AGAIN FOR YOUR HELP.