Section Three

Mathematics Teacher Questionnaire

Mathematics Questionnaire

MTQ Tables
2000 National Survey of Science and Mathematics Education

Mathematics Questionnaire

You have been selected to answer questions about your mathematics instruction. If you do not currently teach mathematics, please call us toll-free at 1-800-937-8288.

How to Complete the Questionnaire

Most of the questions instruct you to "darken one" answer or "darken all that apply." For a few questions, you are asked to write in your answer on the line provided. Please use a #2 pencil or blue or black pen to complete this questionnaire. Darken ovals completely, but do not stray into adjacent ovals. Be sure to erase or white out completely any stray marks.

Class Selection

Part of the questionnaire (sections C and D) asks you to provide information about instruction in a particular class. If you teach mathematics to more than one class, use the label at the right to determine the mathematics class that has been randomly selected for you to answer about. (If your teaching schedule varies by day, use today’s schedule, or if today is not a school day, use the most recent school day.)

If You Have Questions

If you have questions about the study or any items in the questionnaire, call us toll-free at 1-800-937-8288.

Each participating school will receive a voucher for $50 worth of science and mathematics materials. The voucher will be augmented by $15 for each responding teacher. In addition, each participating school will receive a copy of the study’s results in the spring of 2001.

Thank you very much. Your participation is greatly appreciated. Please return the completed questionnaire to us in the postage-paid envelope:

2000 National Survey of Science and Mathematics Education
Westat
1650 Research Blvd.
TB120F
Rockville, MD 20850
A. Teacher Opinions

1. Please provide your opinion about each of the following statements. (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No Opinion</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Students learn mathematics best in classes with students of similar abilities.</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>b. The testing program in my state/district dictates what mathematics content I teach.</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>c. I enjoy teaching mathematics.</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>d. I consider myself a &quot;master&quot; mathematics teacher.</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>e. I have time during the regular school week to work with my colleagues on</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>mathematics curriculum and teaching.</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>f. My colleagues and I regularly share ideas and materials related to mathematics teaching.</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>g. Mathematics teachers in this school regularly observe each other teaching classes as part of sharing and improving instructional strategies.</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>h. Most mathematics teachers in this school contribute actively to making decisions about the mathematics curriculum.</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
</tbody>
</table>

2a. How familiar are you with the NCTM Standards? (Darken one oval.)

- Not at all familiar, SKIP TO QUESTION 3
- Somewhat familiar
- Fairly familiar
- Very familiar

2b. Please indicate the extent of your agreement with the overall vision of mathematics education described in the NCTM Standards. (Darken one oval.)

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>No Opinion</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

2c. To what extent have you implemented recommendations from the NCTM Standards in your mathematics teaching? (Darken one oval.)

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>To a minimal extent</td>
<td>To a moderate extent</td>
<td>To a great extent</td>
</tr>
</tbody>
</table>

B. Teacher Background

3. Please indicate how well prepared you currently feel to do each of the following in your mathematics instruction. (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Task</th>
<th>Not Adequately Prepared</th>
<th>Somewhat Prepared</th>
<th>Fairly Well Prepared</th>
<th>Very Well Prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Take students’ prior understanding into account when planning curriculum and instruction</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>b. Develop students’ conceptual understanding of mathematics</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>c. Provide deeper coverage of fewer mathematics concepts</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>d. Make connections between mathematics and other disciplines</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>e. Lead a class of students using investigative strategies</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>f. Manage a class of students engaged in hands-on/project-based work</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>g. Have students work in cooperative learning groups</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>h. Listen/ask questions as students work in order to gauge their understanding</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>i. Use the textbook as a resource rather than the primary instructional tool</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>j. Teach groups that are heterogeneous in ability</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>k. Teach students who have limited English proficiency</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>l. Recognize and respond to student cultural diversity</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>m. Encourage students’ interest in mathematics</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>n. Encourage participation of females in mathematics</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
<tr>
<td>o. Encourage participation of minorities in mathematics</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
<td>🅿️</td>
</tr>
</tbody>
</table>

Question 3 continues on next page...
3. continued...

p. Involve parents in the mathematics education of their children
q. Use calculators/computers for drill and practice
r. Use calculators/computers for mathematics learning games
s. Use calculators/computers to collect and/or analyze data
t. Use calculators/computers to demonstrate mathematics principles
u. Use calculators/computers for simulations and applications
v. Use the Internet in your mathematics teaching for general reference
w. Use the Internet in your mathematics teaching for data acquisition
x. Use the Internet in your mathematics teaching for collaborative projects with classes/individuals in other schools

4a. Do you have each of the following degrees?

<table>
<thead>
<tr>
<th>Degree</th>
<th>Bachelors</th>
<th>Masters</th>
<th>Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

4b. Please indicate the subject(s) for each of your degrees. (Darken all that apply.)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Bachelors</th>
<th>Masters</th>
<th>Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science/Science Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Education (e.g., History Education, Special Education)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other, please specify ______________________</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Which of the following college courses have you completed? Include both semester hour and quarter hour courses, whether graduate or undergraduate level. Include courses for which you received college credit, even if you took the course in high school. (Darken all that apply.)

**MATHEMATICS**
- Mathematics for elementary school teachers
- Mathematics for middle school teachers
- Geometry for elementary/middle school teachers
- College algebra/trigonometry/elementary functions
- Calculus
- Advanced calculus
- Real analysis
- Differential equations
- Geometry
- Probability and statistics
- Abstract algebra
- Number theory
- Linear algebra
- Applications of mathematics/problem solving
- History of mathematics
- Discrete mathematics
- Other upper division mathematics

**SCIENCES/COMPUTER SCIENCES**
- Biological sciences
- Chemistry
- Physics
- Physical science
- Earth/space science
- Engineering (any)
- Computer programming
- Other computer science

**EDUCATION**
- General methods of teaching
- Methods of teaching mathematics
- Instructional uses of computers/other technologies
- Supervised student teaching in mathematics
6. For each of the following subject areas, indicate the number of college semester and quarter courses you have completed. Count each course you have taken, regardless of whether it was a graduate or undergraduate course. If your transcripts are not available, provide your best estimates.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Semester Courses</th>
<th>Quarter Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Mathematics education</td>
<td></td>
<td></td>
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<tr>
<td>b. Calculus</td>
<td></td>
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<tr>
<td>c. Statistics</td>
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<tr>
<td>d. Advanced calculus</td>
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</tr>
<tr>
<td>e. All other mathematics courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Computer science</td>
<td></td>
<td></td>
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<tr>
<td>g. Science</td>
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</tbody>
</table>

7. Considering all of your undergraduate and graduate mathematics courses, approximately what percentage were completed at each of the following types of institutions? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Institution</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Two-year college/community college/technical school</td>
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</tr>
<tr>
<td>b. Four-year college/university</td>
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</tr>
</tbody>
</table>

8. In what year did you last take a formal course for college credit in: (Please enter your answers in the spaces provided, then darken the corresponding oval in each column.)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Mathematics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. The Teaching of Mathematics</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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</tr>
</tbody>
</table>

9. What is the total amount of time you have spent on professional development in mathematics or the teaching of mathematics in the last 12 months? in the last 3 years? (Include attendance at professional meetings, workshops, and conferences, but do not include formal courses for which you received college credit or time you spent providing professional development for other teachers.) (Darken one oval in each column.)

<table>
<thead>
<tr>
<th>Hours of In-service Education</th>
<th>Last 12 months</th>
<th>Last 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 6 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-15 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-35 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 35 hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. In the past **12 months**, have you:
   
   (Darken one oval on each line.)

   a. Taught any in-service workshops in mathematics or mathematics teaching?  
      🤔 Yes  🤔 No
   b. Mentored another teacher as part of a formal arrangement that is recognized or supported by the school or district, not including supervision of student teachers?  
      🤔 Yes  🤔 No
   c. Received any local, state, or national grants or awards for mathematics teaching?  
      🤔 Yes  🤔 No
   d. Served on a school or district mathematics curriculum committee?  
      🤔 Yes  🤔 No
   e. Served on a school or district mathematics textbook selection committee?  
      🤔 Yes  🤔 No

11. In the past **3 years**, have you participated in any of the following activities related to mathematics or the teaching of mathematics?  
   (Darken one oval on each line.)

   a. Taken a formal college/university mathematics course.  
      (Please do not include courses taken as part of your undergraduate degree.)  
      🤔 Yes  🤔 No
   b. Taken a formal college/university course in the teaching of mathematics.  
      (Please do not include courses taken as part of your undergraduate degree.)  
      🤔 Yes  🤔 No
   c. Observed other teachers teaching mathematics as part of your own professional development (formal or informal).  
      🤔 Yes  🤔 No
   d. Met with a local group of teachers to study/discuss mathematics teaching issues on a regular basis.  
      🤔 Yes  🤔 No
   e. Collaborated on mathematics teaching issues with a group of teachers at a distance using telecommunications.  
      🤔 Yes  🤔 No
   f. Served as a mentor and/or peer coach in mathematics teaching, as part of a formal arrangement that is recognized or supported by the school or district.  
      (Please do not include supervision of student teachers.)  
      🤔 Yes  🤔 No
   g. Attended a workshop on mathematics teaching.  
      🤔 Yes  🤔 No
   h. Attended a national or state mathematics teacher association meeting.  
      🤔 Yes  🤔 No
   i. Applied or applying for certification from the National Board for Professional Teaching Standards (NBPTS).  
      🤔 Yes  🤔 No
   j. Received certification from the National Board for Professional Teaching Standards (NBPTS).  
      🤔 Yes  🤔 No

**Questions 12a-12c ask about your professional development in the last 3 years. If you have been teaching for fewer than 3 years, please answer for the time that you have been teaching.**

12a. Think back to **3 years ago**. How would you rate your level of need for professional development in each of these areas **at that time**?  
   (Darken one oval on each line.)

   Deepening my own mathematics content knowledge
   Understanding student thinking in mathematics
   Learning how to use inquiry/investigation-oriented teaching strategies
   Learning how to use technology in mathematics instruction
   Learning how to assess student learning in mathematics
   Learning how to teach mathematics in a class that includes students with special needs
12b. Considering all the professional development you have participated in during the last 3 years, how much was each of the following emphasized? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Not at all</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning how to use technology in mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12c. Considering all your professional development in the last 3 years, how would you rate its impact in each of these areas? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Little or no impact</th>
<th>Confirmed what I was already doing</th>
<th>Caused me to change my teaching practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning how to use technology in mathematics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13a. Do you teach in a self-contained class? (i.e., you teach multiple subjects to the same class of students all or most of the day.)

- Yes, CONTINUE WITH QUESTIONS 13b AND 13c
- No, SKIP TO QUESTION 14

13b. For teachers of self-contained classes: Many teachers feel better qualified to teach some subject areas than others. How well qualified do you feel to teach each of the following subjects at the grade level(s) you teach, whether or not they are currently included in your curriculum? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Not Well Qualified</th>
<th>Adequately Qualified</th>
<th>Very Well Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Life science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Earth science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Physical science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Mathematics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Reading/Language Arts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Social Studies</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13c. *For teachers of self-contained classes:* We are interested in knowing how much time your students spend studying various subjects. In a typical week, how many days do you have lessons on each of the following subjects, and how many minutes long is an average lesson? (*Please indicate "0" if you do not teach a particular subject to this class.* Please enter your answer in the spaces provided, then darken the corresponding oval in each column. Enter the number of minutes as a 3-digit number; e.g., if 30 minutes, enter as 030.)

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Days Per Week</th>
<th>Approximate Minutes Per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>Days Per Week</td>
<td>Approximate Minutes Per Day</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Studies</td>
<td>Days Per Week</td>
<td>Approximate Minutes Per Day</td>
</tr>
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<tr>
<td>Reading/Language Arts</td>
<td>Days Per Week</td>
<td>Approximate Minutes Per Day</td>
</tr>
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<td></td>
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</tbody>
</table>

NOW GO TO SECTION C, PAGE 8.

14. Which of these categories best describes the way your classes at this school are organized? (Darken one oval.)

a. **Departmentalized Instruction**—you teach subject matter courses (including mathematics, and perhaps other courses) to several different classes of students all or most of the day.

b. **Elementary Enrichment Class**—you teach only mathematics in an elementary school.

c. **Team Teaching**—you collaborate with one or more teachers in teaching multiple subjects to the same class of students; your assignment includes mathematics.

15a. *For teachers of non-self-contained classes:* Within mathematics, many teachers feel better qualified to teach some topics than others. How well qualified do you feel to teach each of the following topics *at the grade level(s) you teach*, whether or not they are currently included in your curriculum? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Not Well Qualified</th>
<th>Adequately Qualified</th>
<th>Very Well Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Numeration and number theory</td>
<td></td>
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<tr>
<td>b. Computation</td>
<td></td>
<td></td>
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<tr>
<td>c. Estimation</td>
<td></td>
<td></td>
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<tr>
<td>d. Measurement</td>
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<td></td>
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<tr>
<td>e. Pre-algebra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Algebra</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>g. Patterns and relationships</td>
<td></td>
<td></td>
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<tr>
<td>h. Geometry and spacial sense</td>
<td></td>
<td></td>
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<tr>
<td>i. Functions (including trigonometric functions) and pre-calculus concepts</td>
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<tr>
<td>j. Data collection and analysis</td>
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<tr>
<td>k. Probability</td>
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<tr>
<td>l. Statistics (e.g., hypothesis tests, curve fitting and regression)</td>
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<tr>
<td>m. Topics from discrete mathematics (e.g., combinatorics, graph theory, recursion)</td>
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<tr>
<td>n. Mathematical structures (e.g., vector spaces, groups, rings, fields)</td>
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<tr>
<td>o. Calculus</td>
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<tr>
<td>p. Technology (calculators, computers) in support of mathematics</td>
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</tbody>
</table>
15b. **For teachers of non-self-contained classes:** For each class period you are currently teaching, regardless of the subject, give the course title, the code-number from the enclosed blue "List of Course Titles" that best describes the content addressed in the class, and the number of students in the class. (Please enter your answers in the spaces provided, then darken the corresponding oval in each column. **If you teach more than one section of a course, record each section separately below.**)

- Note that if you have more than 39 students in any class, you will not be able to darken the ovals, but you should still write the number in the boxes.
- If you teach more than 6 classes per day, please provide the requested information for the additional classes on a separate sheet of paper.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Code #</th>
<th># of Students</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Code #</th>
<th># of Students</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Code #</th>
<th># of Students</th>
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</thead>
<tbody>
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</tbody>
</table>
C. Your Mathematics Teaching in a Particular Class

The questions in this section are about a particular mathematics class you teach. If you teach mathematics to more than one class per day, please consult the label on the front of this questionnaire to determine which mathematics class to use to answer these questions.

16. Using the blue "List of Course Titles," indicate the code number that best describes this course. Please enter your answer in the spaces to the right, then darken the corresponding oval in each column. (If "other" [Code 299], briefly describe content of course:
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
)

17a. Are all students in this class in the same grade?

Yes, specify grade:
THEN SKIP TO QUESTION 18a

No, CONTINUE WITH QUESTION 17b

17b. What grades are represented in this class? (Darken all that apply.) For each grade noted, indicate the number of students in this class in that grade. Write your answer in the space provided, then darken the corresponding oval in each column. Note that if more than 39 students in this class are in a single grade, you will not be able to darken the ovals, but you should still write the number in the boxes.

18a. What is the total number of students in this class? Write your answer in the space provided, then darken the corresponding oval in each column. Note that if you have more than 39 students in this class, you will not be able to darken the ovals, but you should still write the number in the boxes.
18b. Please indicate the number of students in this class in each of the following categories. Consult the enclosed federal guidelines at the end of the course list (blue sheet) if you have any questions about how to classify particular students. (Please enter your answers in the spaces provided, then darken the corresponding oval in each column.)

**RACE/ETHNICITY**

<table>
<thead>
<tr>
<th>American Indian or Alaskan Native</th>
<th>Asian</th>
<th>Black or African-American</th>
<th>Hispanic or Latino (any race)</th>
<th>Native Hawaiian or Other Pacific Islander</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

19a. Questions 19a and 19b apply only to teachers of non-self-contained classes. If you teach a self-contained class, please darken this oval and skip to question 20. What is the usual schedule and length (in minutes) of daily class meetings for this class? If the weekly schedule is normally the same, just complete Week 1, as in Example 1. If you are unable to describe this class in the format below, please attach a separate piece of paper with your description.

### Examples

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>45</td>
<td>90</td>
</tr>
</tbody>
</table>

### For office use only

<table>
<thead>
<tr>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Week 2</td>
</tr>
<tr>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>45</td>
<td>90</td>
</tr>
</tbody>
</table>

19b. What is the calendar duration of this mathematics class? (Darken one oval.)
20. Are students assigned to this class by level of ability? (Darken one oval.)  ☐ Yes  ☐ No

21. Which of the following best describes the ability of the students in this class relative to other students in this school? (Darken one oval.)

☐ Fairly homogeneous and low in ability
☐ Fairly homogeneous and average in ability
☐ Fairly homogeneous and high in ability
☐ Heterogeneous, with a mixture of two or more ability levels

22. Indicate if any of the students in this mathematics class are formally classified as each of the following: (Darken all that apply.)

☐ Limited English Proficiency
☐ Learning Disabled
☐ Mentally Handicapped
☐ Physically Handicapped, please specify handicap(s): _____________________________________________________

23. Think about your plans for this mathematics class for the entire course. How much emphasis will each of the following student objectives receive? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Student Objective</th>
<th>None</th>
<th>Minimal Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Increase students’ interest in mathematics</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Learn mathematical concepts</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Learn mathematical algorithms/procedures</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. Develop students’ computational skills</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. Learn how to solve problems</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f. Learn to reason mathematically</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g. Learn how mathematics ideas connect with one another</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>h. Prepare for further study in mathematics</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>i. Understand the logical structure of mathematics</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>j. Learn about the history and nature of mathematics</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>k. Learn to explain ideas in mathematics effectively</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>l. Learn how to apply mathematics in business and industry</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>m. Learn to perform computations with speed and accuracy</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>n. Prepare for standardized tests</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

24. About how often do you do each of the following in your mathematics instruction? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Instruction</th>
<th>Never</th>
<th>Rarely (e.g., a few times a year)</th>
<th>Sometimes (e.g., once or twice a month)</th>
<th>Often (e.g., once or twice a week)</th>
<th>All or almost all mathematics lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Introduce content through formal presentations</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Pose open-ended questions</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Engage the whole class in discussions</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. Require students to explain their reasoning when giving an answer</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. Ask students to explain concepts to one another</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f. Ask students to consider alternative methods for solutions</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g. Ask students to use multiple representations (e.g., numeric, graphic, geometric, etc.)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>h. Allow students to work at their own pace</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>i. Help students see connections between mathematics and other disciplines</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>j. Assign mathematics homework</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>k. Read and comment on the reflections students have written, e.g., in their journals</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
25. About how often do students in this mathematics class take part in the following types of activities? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely (e.g., a few times a year)</th>
<th>Sometimes (e.g., once or twice a month)</th>
<th>Often (e.g., once or twice a week)</th>
<th>All or almost all mathematics lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Listen and take notes during presentation by teacher</td>
<td></td>
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<tr>
<td>b. Work in groups</td>
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<tr>
<td>c. Read from a mathematics textbook in class</td>
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<tr>
<td>d. Read other (non-textbook) mathematics-related materials in class</td>
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<tr>
<td>e. Engage in mathematical activities using concrete materials</td>
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<tr>
<td>f. Practice routine computations/algorithms</td>
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<tr>
<td>g. Review homework/worksheet assignments</td>
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<tr>
<td>h. Follow specific instructions in an activity or investigation</td>
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<tr>
<td>i. Design their own activity or investigation</td>
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<tr>
<td>j. Use mathematical concepts to interpret and solve applied problems</td>
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<tr>
<td>k. Answer textbook or worksheet questions</td>
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<tr>
<td>l. Record, represent, and/or analyze data</td>
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<tr>
<td>m. Write reflections (e.g., in a journal)</td>
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<tr>
<td>n. Make formal presentations to the rest of the class</td>
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<tr>
<td>o. Work on extended mathematics investigations or projects (a week or more in duration)</td>
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<tr>
<td>p. Use calculators or computers for learning or practicing skills</td>
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<tr>
<td>q. Use calculators or computers to develop conceptual understanding</td>
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<tr>
<td>r. Use calculators or computers as a tool (e.g., spreadsheets, data analysis)</td>
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</tbody>
</table>

26. About how often do students in this mathematics class use calculators/computers to: (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Rarely (e.g., a few times a year)</th>
<th>Sometimes (e.g., once or twice a month)</th>
<th>Often (e.g., once or twice a week)</th>
<th>All or almost all mathematics lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Do drill and practice</td>
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<tr>
<td>b. Demonstrate mathematics principles</td>
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<tr>
<td>c. Play mathematics learning games</td>
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<tr>
<td>d. Do simulations</td>
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<tr>
<td>e. Collect data using sensors or probes</td>
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<tr>
<td>f. Retrieve or exchange data</td>
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<tr>
<td>g. Solve problems using simulations</td>
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<tr>
<td>h. Take a test or quiz</td>
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</tbody>
</table>

27. How often do you assess student progress in mathematics in each of the following ways? (Darken one oval on each line.)

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Never</th>
<th>Rarely (e.g., a few times a year)</th>
<th>Sometimes (e.g., once or twice a month)</th>
<th>Often (e.g., once or twice a week)</th>
<th>All or almost all mathematics lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Conduct a pre-assessment to determine what students already know.</td>
<td></td>
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<tr>
<td>b. Observe students and ask questions as they work individually.</td>
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<tr>
<td>c. Observe students and ask questions as they work in small groups.</td>
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<tr>
<td>d. Ask students questions during large group discussions.</td>
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<tr>
<td>e. Use assessments embedded in class activities to see if students are &quot;getting it&quot;</td>
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<tr>
<td>f. Review student homework.</td>
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</tr>
<tr>
<td>g. Review student notebooks/journals.</td>
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<tr>
<td>h. Review student portfolios.</td>
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</tr>
<tr>
<td>i. Have students do long-term mathematics projects.</td>
<td></td>
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<tr>
<td>j. Have students present their work to the class.</td>
<td></td>
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</tr>
<tr>
<td>k. Give predominantly short-answer tests (e.g., multiple choice, true/false, fill in the blank).</td>
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</tr>
</tbody>
</table>

Question 27 continues on next page...
27. continued

l. Give tests requiring open-ended responses (e.g., descriptions, explanations).

m. Grade student work on open-ended and/or laboratory tasks using defined criteria (e.g., a scoring rubric).

n. Have students assess each other (peer evaluation).

28. For the following equipment, please indicate the extent to which each is available, whether or not each is needed, and the extent to which each is integrated in this mathematics class.

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Not at all Available</th>
<th>Readily Available</th>
<th>Needed?</th>
<th>Never use in this course</th>
<th>Use in specific parts of this course</th>
<th>Fully integrated into this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Overhead projector</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>b. Videotape player</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>c. Videodisc player</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>d. CD-ROM player</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>e. Four-function calculators</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>f. Fraction calculators</td>
<td></td>
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<td></td>
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<tr>
<td>g. Graphing calculators</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>h. Scientific calculators</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>i. Computers</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>j. Calculator/computer lab interfacing devices</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>k. Computers with Internet connection</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

29. How much of your own money do you estimate you will spend for supplies for this mathematics class this school year (or semester or quarter if not a full-year course)? (Please enter your answer as a 3-digit number rounded to the nearest dollar, i.e., enter $25.19 as 025. Enter your answer in the spaces to the right, then darken the corresponding oval in each column.)

If none, darken this oval: 

30. How much of your own money do you estimate you will spend for your own professional development activities during the period Sept. 1, 1999 - Aug. 31, 2000? (Please enter your answer as a 3-digit number rounded to the nearest dollar, i.e., enter $25.19 as 025. Enter your answer in the spaces to the right, then darken the corresponding oval in each column.)

If none, darken this oval: 

31. How much control do you have over each of the following for this mathematics class? (Darken one oval on each line.)

a. Determining course goals and objectives

b. Selecting textbooks/instructional programs

c. Selecting other instructional materials

d. Selecting content, topics, and skills to be taught

e. Selecting the sequence in which topics are covered

f. Setting the pace for covering topics

g. Selecting teaching techniques

h. Determining the amount of homework to be assigned

i. Choosing criteria for grading students

j. Choosing tests for classroom assessment

### Table for Equipment Integration

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Not at all Available</th>
<th>Readily Available</th>
<th>Needed?</th>
<th>Never use in this course</th>
<th>Use in specific parts of this course</th>
<th>Fully integrated into this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Overhead projector</td>
<td></td>
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</tr>
<tr>
<td>b. Videotape player</td>
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<tr>
<td>c. Videodisc player</td>
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<tr>
<td>d. CD-ROM player</td>
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<tr>
<td>e. Four-function calculators</td>
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<tr>
<td>f. Fraction calculators</td>
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<tr>
<td>g. Graphing calculators</td>
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<tr>
<td>h. Scientific calculators</td>
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<tr>
<td>i. Computers</td>
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<tr>
<td>j. Calculator/computer lab interfacing devices</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>k. Computers with Internet connection</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
32. How much mathematics homework do you assign to this mathematics class in a typical week? (Darken one oval.)

- 0-30 min
- 31-60 min
- 61-90 min
- 91-120 min
- 2-3 hours
- More than 3 hours

33a. Are you using one or more commercially published textbooks or programs for teaching mathematics to this class? (Darken one oval.)

- No, SKIP TO SECTION D, PAGE 14
- Yes, CONTINUE WITH 33b

33b. Which best describes your use of textbooks/programs in this class? (Darken one oval.)

- Use one textbook or program all or most of the time
- Use multiple textbooks/programs

34. Indicate the publisher of the one textbook/program used most often by students in this class. (Darken one oval.)

- Addison Wesley Longman, Inc/Scott Foresman
- Brooks/Cole Publishing Co
- CORD Communications
- Creative Publications
- Dale Seymour Publications
- EFA & Associates
- Encyclopaedia Britannica
- Everyday Learning Corporation
- Globe Fearon, Inc / Cambridge
- Harcourt Brace/Harcourt, Brace & Jovanovich
- Holt, Rinehart and Winston, Inc
- Houghton Mifflin Company/McDougal Littell/D.C. Heath
- Kendall Hunt Publishing
- Key Curriculum Press
- Optical Data Corporation
- Prentice Hall, Inc.
- Saxon Publishers
- Silver Burdett Ginn
- South-Western Educational Publishing
- VideoText Interactive
- Wadsworth Publishing
- West Educational Publishing
- Other, please specify: ____________________________

35a. Please indicate the title, author, and publication year of the one textbook/program used most often by students in this class.

Title: ______________________________________

First Author: ______________________________________

Publication Year: ________ Edition: __________

35b. Approximately what percentage of this textbook/program will you "cover" in this course? (Darken one oval.)

- < 25%
- 25-49%
- 50-74%
- 75-90%
- >90%

35c. How would you rate the overall quality of this textbook/program? (Darken one oval.)

- Very Poor
- Poor
- Fair
- Good
- Very Good
- Excellent
D. Your Most Recent Mathematics Lesson in This Class

Questions 36-38 refer to the last time you taught mathematics to this class. Do not be concerned if this lesson was not typical of instruction in this class. (Please enter your answers as 3-digit numbers, i.e., if 30 minutes, enter as 030. Enter your answers in the spaces provided, then darken the corresponding oval in each column.)

36a. How many minutes were allocated to the most recent mathematics lesson?
Note: Teachers in departmentalized and other non-self-contained settings should answer for the entire length of the class period, even if there were interruptions.

36b. Of these, how many minutes were spent on the following:
(The sum of the numbers in 1.-6. below should equal your response in 36a.)

1. Daily routines, interruptions, and other non-instructional activities
2. Whole class lecture/discussions
3. Individual students reading textbooks, completing worksheets, etc.
4. Working with hands-on or manipulative materials
5. Non-manipulative small group work
6. Other

37. Which of the following activities took place during that mathematics lesson? (Darken all that apply.)

- Lecture
- Discussion
- Students completing textbook/worksheet problems
- Students doing hands-on/manipulative activities
- Students reading about mathematics
- Students working in small groups
- Students using calculators
- Students using computers
- Students using other technologies
- Test or quiz
- None of the above

38. Did that lesson take place on the most recent day you met with that class?   Yes   No
E. Demographic Information

39. Indicate your sex:
   ☐ Male
   ☐ Female

40. Are you: (Darken all that apply.)
   ☐ American Indian or Alaskan Native
   ☐ Asian
   ☐ Black or African-American
   ☐ Hispanic or Latino
   ☐ Native Hawaiian or Other Pacific Islander
   ☐ White

41. In what year were you born? (Enter the last two digits of the year you were born; e.g., if you were born in 1959, enter 59. Please enter your answer in the spaces to the right, then darken the corresponding oval in each column.)

42. How many years have you taught at the K-12 level prior to this school year? (Please enter your answer in the spaces to the right, then darken the corresponding oval in each column.)

43. If you have an email address, please write it here: ________________________________

44. When did you complete this questionnaire? Date: ______ / ______ / ______
   Month   Day   Year

Please make a photocopy of this questionnaire and keep it in case the original is lost in the mail. Please return the original to:

2000 National Survey of Science and Mathematics Education
Westat
1650 Research Blvd.
TB120F
Rockville, MD  20850

THANK YOU!
Table MTQ 1.1

Grade K–4 Mathematics Teachers’ Opinions on Curriculum and Instruction Issues

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No Opinion</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students learn mathematics best in classes with students of similar abilities</td>
<td>4 (0.9)</td>
<td>39 (2.1)</td>
<td>8 (1.4)</td>
<td>41 (2.6)</td>
<td>7 (1.2)</td>
</tr>
<tr>
<td>The testing program in my state/district dictates what mathematics content I teach</td>
<td>1 (0.4)</td>
<td>13 (1.5)</td>
<td>7 (1.3)</td>
<td>55 (2.2)</td>
<td>24 (2.1)</td>
</tr>
<tr>
<td>I enjoy teaching mathematics</td>
<td>1 (0.3)</td>
<td>2 (0.6)</td>
<td>4 (1.0)</td>
<td>54 (2.5)</td>
<td>40 (2.4)</td>
</tr>
<tr>
<td>I consider myself a “master” mathematics teacher</td>
<td>2 (0.7)</td>
<td>27 (2.0)</td>
<td>31 (2.3)</td>
<td>34 (2.2)</td>
<td>6 (0.9)</td>
</tr>
<tr>
<td>I have time during the regular school week to work with my colleagues on mathematics curriculum and teaching</td>
<td>23 (2.0)</td>
<td>47 (2.5)</td>
<td>6 (1.1)</td>
<td>22 (2.0)</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>My colleagues and I regularly share ideas and materials related to mathematics teaching</td>
<td>6 (1.2)</td>
<td>33 (2.4)</td>
<td>5 (1.1)</td>
<td>49 (2.5)</td>
<td>8 (1.1)</td>
</tr>
<tr>
<td>Mathematics teachers in this school regularly observe each other teaching classes as part of sharing and improving instructional strategies</td>
<td>36 (2.2)</td>
<td>53 (2.3)</td>
<td>5 (1.0)</td>
<td>4 (0.9)</td>
<td>2 (0.7)</td>
</tr>
<tr>
<td>Most mathematics teachers in this school contribute actively to making decisions about the mathematics curriculum</td>
<td>13 (1.5)</td>
<td>32 (2.7)</td>
<td>18 (1.8)</td>
<td>33 (2.4)</td>
<td>4 (0.8)</td>
</tr>
</tbody>
</table>

Table MTQ 1.2

Grade 5–8 Mathematics Teachers’ Opinions on Curriculum and Instruction Issues

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No Opinion</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students learn mathematics best in classes with students of similar abilities</td>
<td>2 (1.2)</td>
<td>24 (3.1)</td>
<td>7 (2.6)</td>
<td>45 (3.4)</td>
<td>23 (2.5)</td>
</tr>
<tr>
<td>The testing program in my state/district dictates what mathematics content I teach</td>
<td>2 (1.2)</td>
<td>15 (2.4)</td>
<td>8 (1.9)</td>
<td>50 (3.2)</td>
<td>25 (3.3)</td>
</tr>
<tr>
<td>I enjoy teaching mathematics</td>
<td>0 (0.1)</td>
<td>1 (0.6)</td>
<td>3 (1.7)</td>
<td>32 (3.1)</td>
<td>64 (3.4)</td>
</tr>
<tr>
<td>I consider myself a “master” mathematics teacher</td>
<td>2 (1.0)</td>
<td>18 (2.9)</td>
<td>23 (2.6)</td>
<td>40 (3.5)</td>
<td>17 (2.3)</td>
</tr>
<tr>
<td>I have time during the regular school week to work with my colleagues on mathematics curriculum and teaching</td>
<td>24 (3.0)</td>
<td>42 (3.6)</td>
<td>3 (0.7)</td>
<td>26 (3.5)</td>
<td>5 (1.5)</td>
</tr>
<tr>
<td>My colleagues and I regularly share ideas and materials related to mathematics teaching</td>
<td>9 (2.5)</td>
<td>32 (3.2)</td>
<td>4 (1.2)</td>
<td>41 (3.2)</td>
<td>13 (2.1)</td>
</tr>
<tr>
<td>Mathematics teachers in this school regularly observe each other teaching classes as part of sharing and improving instructional strategies</td>
<td>41 (3.7)</td>
<td>47 (3.9)</td>
<td>6 (1.0)</td>
<td>5 (1.0)</td>
<td>2 (0.8)</td>
</tr>
<tr>
<td>Most mathematics teachers in this school contribute actively to making decisions about the mathematics curriculum</td>
<td>16 (3.0)</td>
<td>31 (2.8)</td>
<td>12 (2.4)</td>
<td>35 (2.9)</td>
<td>6 (1.1)</td>
</tr>
<tr>
<td>Table MTQ 1.3</td>
<td>Grade 9–12 Mathematics Teachers’ Opinions on Curriculum and Instruction Issues</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td><strong>Percent of Teachers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Strongly Disagree</strong></td>
<td><strong>Disagree</strong></td>
<td><strong>No Opinion</strong></td>
<td><strong>Agree</strong></td>
<td><strong>Strongly Agree</strong></td>
</tr>
<tr>
<td>Students learn mathematics best in classes with students of similar abilities</td>
<td>2 (0.6)</td>
<td>14 (1.4)</td>
<td>4 (1.0)</td>
<td>56 (2.1)</td>
<td>24 (1.5)</td>
</tr>
<tr>
<td>The testing program in my state/district dictates what mathematics content I teach</td>
<td>6 (1.5)</td>
<td>19 (1.8)</td>
<td>10 (1.3)</td>
<td>48 (2.2)</td>
<td>18 (1.6)</td>
</tr>
<tr>
<td>I enjoy teaching mathematics</td>
<td>0 (0.1)</td>
<td>0 (0.1)</td>
<td>2 (0.7)</td>
<td>28 (1.7)</td>
<td>70 (1.9)</td>
</tr>
<tr>
<td>I consider myself a “master” mathematics teacher</td>
<td>0 (0.3)</td>
<td>11 (1.6)</td>
<td>20 (1.5)</td>
<td>46 (2.0)</td>
<td>23 (1.7)</td>
</tr>
<tr>
<td>I have time during the regular school week to work with my colleagues on mathematics curriculum and teaching</td>
<td>20 (1.4)</td>
<td>47 (1.8)</td>
<td>5 (0.7)</td>
<td>26 (1.5)</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>My colleagues and I regularly share ideas and materials related to mathematics teaching</td>
<td>6 (1.4)</td>
<td>27 (2.1)</td>
<td>4 (0.9)</td>
<td>53 (2.4)</td>
<td>10 (1.1)</td>
</tr>
<tr>
<td>Mathematics teachers in this school regularly observe each other teaching classes as part of sharing and improving instructional strategies</td>
<td>40 (2.0)</td>
<td>48 (2.2)</td>
<td>5 (0.8)</td>
<td>7 (0.9)</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Most mathematics teachers in this school contribute actively to making decisions about the mathematics curriculum</td>
<td>11 (1.5)</td>
<td>22 (1.5)</td>
<td>9 (1.4)</td>
<td>48 (2.1)</td>
<td>10 (1.2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table MTQ 2</th>
<th>Mathematics Teachers’ Familiarity with, Agreement with, and Implementation of NCTM Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Percent of Teachers</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Grades K–4</strong></td>
</tr>
<tr>
<td>How familiar are you with the NCTM Standards?</td>
<td></td>
</tr>
<tr>
<td>Not at all familiar</td>
<td>38 (2.9)</td>
</tr>
<tr>
<td>Somewhat familiar</td>
<td>31 (2.4)</td>
</tr>
<tr>
<td>Fairly familiar</td>
<td>21 (2.0)</td>
</tr>
<tr>
<td>Very familiar</td>
<td>10 (1.5)</td>
</tr>
<tr>
<td>Please indicate the extent of your agreement with the overall vision of mathematics education described in the NCTM Standards</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>Disagree</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>No Opinion</td>
<td>20 (2.2)</td>
</tr>
<tr>
<td>Agree</td>
<td>69 (2.7)</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>10 (1.9)</td>
</tr>
<tr>
<td>To what extent have you implemented recommendations from the NCTM Standards in your mathematics teaching?</td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>2 (1.0)</td>
</tr>
<tr>
<td>To a minimal extent</td>
<td>16 (2.1)</td>
</tr>
<tr>
<td>To a moderate extent</td>
<td>56 (3.5)</td>
</tr>
<tr>
<td>To a great extent</td>
<td>26 (2.8)</td>
</tr>
<tr>
<td>Task</td>
<td>Not Adequately Prepared</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Take students’ prior understanding into account when planning</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>curriculum and instruction</td>
<td></td>
</tr>
<tr>
<td>Develop students’ conceptual understanding of mathematics</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>Provide deeper coverage of fewer mathematics concepts</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td>Make connections between mathematics and other disciplines</td>
<td>0 (0.3)</td>
</tr>
<tr>
<td>Lead a class of students using investigative strategies</td>
<td>4 (0.9)</td>
</tr>
<tr>
<td>Manage a class of students engaged in hands-on/project-based work</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Have students work in cooperative learning groups</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Listen/ask questions as students work in order to gauge their</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>understanding</td>
<td></td>
</tr>
<tr>
<td>Use the textbook as a resource rather than the primary</td>
<td>5 (1.1)</td>
</tr>
<tr>
<td>instructional tool</td>
<td></td>
</tr>
<tr>
<td>Teach groups that are heterogeneous in ability</td>
<td>3 (0.9)</td>
</tr>
<tr>
<td>Teach students that have limited English proficiency</td>
<td>33 (2.5)</td>
</tr>
<tr>
<td>Recognize and respond to student cultural diversity</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td>Encourage students’ interest in mathematics</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>Encourage participation of females in mathematics</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Encourage participation of minorities in mathematics</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Involve parents in the mathematics education of their children</td>
<td>3 (1.0)</td>
</tr>
<tr>
<td>Use calculators/computers for drill and practice</td>
<td>11 (1.7)</td>
</tr>
<tr>
<td>Use calculators/computers for mathematics learning games</td>
<td>9 (1.3)</td>
</tr>
<tr>
<td>Use calculators/computers to collect and/or analyze data</td>
<td>23 (2.4)</td>
</tr>
<tr>
<td>Use calculators/computers to demonstrate mathematics principles</td>
<td>22 (2.4)</td>
</tr>
<tr>
<td>Use calculators/computers for simulations and applications</td>
<td>26 (2.5)</td>
</tr>
<tr>
<td>Use the Internet in your mathematics teaching for general reference</td>
<td>45 (2.7)</td>
</tr>
<tr>
<td>Use the Internet in your mathematics teaching for data acquisition</td>
<td>51 (2.4)</td>
</tr>
<tr>
<td>Use the Internet in you mathematics teaching for collaborative</td>
<td>61 (2.3)</td>
</tr>
<tr>
<td>projects with classes/individuals in other schools</td>
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</tbody>
</table>
Table MTQ 3.2
Grade 5–8 Mathematics Teachers’ Perceptions of Their Preparation for Each of a Number of Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Adequately Prepared</td>
</tr>
<tr>
<td>Take students’ prior understanding into account when planning curriculum and instruction</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Develop students’ conceptual understanding of mathematics</td>
<td>1 (0.7)</td>
</tr>
<tr>
<td>Provide deeper coverage of fewer mathematics concepts</td>
<td>2 (0.7)</td>
</tr>
<tr>
<td>Make connections between mathematics and other disciplines</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Lead a class of students using investigative strategies</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td>Manage a class of students engaged in hands-on/project-based work</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Have students work in cooperative learning groups</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td>Listen/ask questions as students work in order to gauge their understanding</td>
<td>0 (0.4)</td>
</tr>
<tr>
<td>Use the textbook as a resource rather than the primary instructional tool</td>
<td>7 (2.4)</td>
</tr>
<tr>
<td>Teach groups that are heterogeneous in ability</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>Teach students that have limited English proficiency</td>
<td>47 (4.0)</td>
</tr>
<tr>
<td>Recognize and respond to student cultural diversity</td>
<td>6 (1.2)</td>
</tr>
<tr>
<td>Encourage students’ interest in mathematics</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Encourage participation of females in mathematics</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Encourage participation of minorities in mathematics</td>
<td>3 (1.8)</td>
</tr>
<tr>
<td>Involve parents in the mathematics education of their children</td>
<td>8 (1.6)</td>
</tr>
<tr>
<td>Use calculators/computers for drill and practice</td>
<td>7 (2.1)</td>
</tr>
<tr>
<td>Use calculators/computers for mathematics learning games</td>
<td>6 (1.1)</td>
</tr>
<tr>
<td>Use calculators/computers to collect and/or analyze data</td>
<td>12 (2.2)</td>
</tr>
<tr>
<td>Use calculators/computers to demonstrate mathematics principles</td>
<td>14 (2.3)</td>
</tr>
<tr>
<td>Use calculators/computers for simulations and applications</td>
<td>20 (3.1)</td>
</tr>
<tr>
<td>Use the Internet in your mathematics teaching for general reference</td>
<td>34 (3.5)</td>
</tr>
<tr>
<td>Use the Internet in your mathematics teaching for data acquisition</td>
<td>41 (3.3)</td>
</tr>
<tr>
<td>Use the Internet in your mathematics teaching for collaborative projects with classes/individuals in other schools</td>
<td>54 (3.6)</td>
</tr>
<tr>
<td>Table MTQ 3.3</td>
<td>Grade 9–12 Mathematics Teachers’ Perceptions of Their Preparation for Each of a Number of Tasks</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Percent of Teachers</td>
<td>Not Adequately Prepared</td>
</tr>
<tr>
<td>'Take students’ prior understanding into account when planning curriculum and instruction'</td>
<td>2 (0.9)</td>
</tr>
<tr>
<td>Develop students’ conceptual understanding of mathematics</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>Provide deeper coverage of fewer mathematics concepts</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td>Make connections between mathematics and other disciplines</td>
<td>4 (1.1)</td>
</tr>
<tr>
<td>Lead a class of students using investigative strategies</td>
<td>7 (0.9)</td>
</tr>
<tr>
<td>Manage a class of students engaged in hands-on/project-based work</td>
<td>7 (0.9)</td>
</tr>
<tr>
<td>Have students work in cooperative learning groups</td>
<td>3 (0.5)</td>
</tr>
<tr>
<td>Listen/ask questions as students work in order to gauge their understanding</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Use the textbook as a resource rather than the primary instructional tool</td>
<td>4 (0.7)</td>
</tr>
<tr>
<td>Teach groups that are heterogeneous in ability</td>
<td>4 (0.6)</td>
</tr>
<tr>
<td>Teach students that have limited English proficiency</td>
<td>48 (2.0)</td>
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<tr>
<td>Recognize and respond to student cultural diversity</td>
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<tr>
<td>Encourage students’ interest in mathematics</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Encourage participation of females in mathematics</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Encourage participation of minorities in mathematics</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>Involve parents in the mathematics education of their children</td>
<td>16 (1.4)</td>
</tr>
<tr>
<td>Use calculators/computers for drill and practice</td>
<td>2 (0.4)</td>
</tr>
<tr>
<td>Use calculators/computers for mathematics learning games</td>
<td>13 (1.1)</td>
</tr>
<tr>
<td>Use calculators/computers to collect and/or analyze data</td>
<td>8 (0.8)</td>
</tr>
<tr>
<td>Use calculators/computers to demonstrate mathematics principles</td>
<td>6 (0.7)</td>
</tr>
<tr>
<td>Use calculators/computers for simulations and applications</td>
<td>11 (1.1)</td>
</tr>
<tr>
<td>Use the Internet in your mathematics teaching for general reference</td>
<td>35 (1.8)</td>
</tr>
<tr>
<td>Use the Internet in your mathematics teaching for data acquisition</td>
<td>36 (1.8)</td>
</tr>
<tr>
<td>Use the Internet in you mathematics teaching for collaborative projects with classes/individuals in other schools</td>
<td>56 (2.0)</td>
</tr>
</tbody>
</table>
### Table MTQ 4a
**Degrees of Mathematics Teachers**

<table>
<thead>
<tr>
<th>Degrees of Mathematics Teachers</th>
<th>Percent of Teachers</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
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<tr>
<td>Bachelors</td>
<td>100 (0.0)</td>
</tr>
<tr>
<td>Masters</td>
<td>41 (2.6)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0 (0.2)</td>
</tr>
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</table>

### Table MTQ 4b
**Subjects of Mathematics Teachers’ Degrees**

<table>
<thead>
<tr>
<th>Subjects of Mathematics Teachers’ Degrees</th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>Mathematics</td>
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</tr>
<tr>
<td>Bachelors</td>
<td>7 (1.2)</td>
</tr>
<tr>
<td>Masters</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0 —*</td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
</tr>
<tr>
<td>Bachelors</td>
<td>2 (0.7)</td>
</tr>
<tr>
<td>Masters</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Mathematics Education</td>
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<tr>
<td>Bachelors</td>
<td>6 (1.0)</td>
</tr>
<tr>
<td>Masters</td>
<td>1 (0.6)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0 —*</td>
</tr>
<tr>
<td>Science/Science Education</td>
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</tr>
<tr>
<td>Bachelors</td>
<td>8 (1.3)</td>
</tr>
<tr>
<td>Masters</td>
<td>2 (0.7)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0 —*</td>
</tr>
<tr>
<td>Elementary Education</td>
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<tr>
<td>Bachelors</td>
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</tr>
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<td>Masters</td>
<td>26 (2.3)</td>
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<td>Doctorate</td>
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</tr>
<tr>
<td>Other Education</td>
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</tr>
<tr>
<td>Bachelors</td>
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</tr>
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<td>Masters</td>
<td>16 (2.0)</td>
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<tr>
<td>Doctorate</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>Other Subject</td>
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</tr>
<tr>
<td>Bachelors</td>
<td>15 (1.8)</td>
</tr>
<tr>
<td>Masters</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0 —*</td>
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</tbody>
</table>

* No teachers in the sample selected this response option. Thus, it is not possible to calculate the standard error of this estimate.
### Table MTQ 5
#### College Courses Completed by Mathematics Teachers

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics for elementary school teachers</td>
<td>96 (1.0)</td>
<td>81 (2.7)</td>
<td>19 (1.8)</td>
</tr>
<tr>
<td>Mathematics for middle school teachers</td>
<td>5 (1.0)</td>
<td>28 (2.8)</td>
<td>26 (1.9)</td>
</tr>
<tr>
<td>Geometry for elementary/middle school teachers</td>
<td>21 (1.5)</td>
<td>28 (2.4)</td>
<td>17 (1.6)</td>
</tr>
<tr>
<td>College algebra/trigonometry/elem function</td>
<td>42 (2.2)</td>
<td>56 (3.5)</td>
<td>80 (1.5)</td>
</tr>
<tr>
<td>Calculus</td>
<td>12 (1.7)</td>
<td>31 (2.5)</td>
<td>96 (0.9)</td>
</tr>
<tr>
<td>Advanced calculus</td>
<td>3 (0.8)</td>
<td>13 (1.5)</td>
<td>70 (2.0)</td>
</tr>
<tr>
<td>Real analysis</td>
<td>1 (0.5)</td>
<td>6 (1.0)</td>
<td>38 (2.0)</td>
</tr>
<tr>
<td>Differential equations</td>
<td>2 (0.8)</td>
<td>12 (1.5)</td>
<td>65 (2.0)</td>
</tr>
<tr>
<td>Geometry</td>
<td>32 (2.1)</td>
<td>37 (3.2)</td>
<td>82 (1.3)</td>
</tr>
<tr>
<td>Probability and statistics</td>
<td>33 (2.5)</td>
<td>51 (3.5)</td>
<td>86 (1.7)</td>
</tr>
<tr>
<td>Abstract algebra</td>
<td>5 (1.1)</td>
<td>12 (1.3)</td>
<td>64 (2.0)</td>
</tr>
<tr>
<td>Number theory</td>
<td>8 (1.5)</td>
<td>20 (2.6)</td>
<td>56 (2.1)</td>
</tr>
<tr>
<td>Linear algebra</td>
<td>9 (1.6)</td>
<td>16 (1.8)</td>
<td>81 (1.6)</td>
</tr>
<tr>
<td>Applications of mathematics/problem solving</td>
<td>21 (1.9)</td>
<td>23 (2.2)</td>
<td>37 (1.7)</td>
</tr>
<tr>
<td>History of mathematics</td>
<td>3 (0.7)</td>
<td>11 (1.5)</td>
<td>42 (1.9)</td>
</tr>
<tr>
<td>Discrete mathematics</td>
<td>1 (0.4)</td>
<td>7 (0.9)</td>
<td>37 (1.7)</td>
</tr>
<tr>
<td>Other upper division mathematics</td>
<td>5 (1.0)</td>
<td>17 (2.0)</td>
<td>59 (1.9)</td>
</tr>
</tbody>
</table>

#### Science/Computer Sciences

| Biological sciences                                                        | 77 (2.2)   | 71 (2.9)   | 49 (2.1)    |
| Chemistry                                                                  | 31 (2.3)   | 40 (3.3)   | 47 (2.0)    |
| Physics                                                                    | 19 (1.9)   | 26 (2.8)   | 52 (2.1)    |
| Physical science                                                           | 51 (2.4)   | 49 (3.4)   | 23 (2.0)    |
| Earth/space science                                                        | 41 (2.4)   | 42 (3.6)   | 20 (1.8)    |
| Engineering                                                                | 1 (0.4)    | 4 (0.9)    | 15 (1.5)    |
| Computer programming                                                       | 12 (1.5)   | 29 (2.8)   | 63 (2.1)    |
| Other computer science                                                     | 21 (1.8)   | 28 (3.2)   | 28 (2.1)    |

#### Education

| General methods of teaching                                               | 95 (1.0)   | 93 (1.5)   | 90 (1.2)    |
| Methods of teaching mathematics                                          | 79 (2.1)   | 80 (2.6)   | 77 (2.2)    |
| Instructional uses of computers/other technologies                      | 37 (2.1)   | 44 (3.3)   | 43 (2.2)    |
| Supervised student teaching in mathematics                               | 38 (2.7)   | 42 (3.8)   | 70 (2.0)    |
### Table MTQ 6.1
**Number of College Semester Courses Completed by Grade K–4 Mathematics Teachers**

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Mathematics education</th>
<th>Calculus</th>
<th>Statistics</th>
<th>Advanced calculus</th>
<th>All other mathematics courses</th>
<th>Computer science</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6 (1.1)</td>
<td>87 (1.7)</td>
<td>61 (2.5)</td>
<td>96 (1.0)</td>
<td>1 (0.4)</td>
<td>56 (2.2)</td>
<td>6 (1.3)</td>
</tr>
<tr>
<td>1</td>
<td>29 (2.0)</td>
<td>10 (1.5)</td>
<td>30 (2.3)</td>
<td>3 (0.8)</td>
<td>29 (2.0)</td>
<td>24 (1.8)</td>
<td>14 (1.8)</td>
</tr>
<tr>
<td>2</td>
<td>24 (1.9)</td>
<td>2 (0.7)</td>
<td>6 (1.0)</td>
<td>0 (0.3)</td>
<td>22 (1.9)</td>
<td>13 (1.5)</td>
<td>28 (2.2)</td>
</tr>
<tr>
<td>3</td>
<td>13 (1.5)</td>
<td>1 (0.4)</td>
<td>2 (0.6)</td>
<td>0 (0.2)</td>
<td>19 (1.9)</td>
<td>3 (0.8)</td>
<td>19 (1.9)</td>
</tr>
<tr>
<td>4</td>
<td>13 (1.5)</td>
<td>0 —*</td>
<td>1 (0.6)</td>
<td>0 (0.2)</td>
<td>14 (1.8)</td>
<td>2 (0.6)</td>
<td>13 (1.8)</td>
</tr>
<tr>
<td>5</td>
<td>2 (0.6)</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 —*</td>
<td>6 (1.0)</td>
<td>0 (0.2)</td>
<td>7 (1.3)</td>
</tr>
<tr>
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<td>6 (0.9)</td>
<td>0 (0.2)</td>
<td>0 (0.1)</td>
<td>0 —*</td>
<td>4 (0.9)</td>
<td>2 (0.5)</td>
<td>7 (1.3)</td>
</tr>
<tr>
<td>7</td>
<td>2 (0.8)</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 —*</td>
<td>2 (0.7)</td>
<td>0 (0.2)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>8</td>
<td>1 (0.6)</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 —*</td>
<td>1 (0.6)</td>
<td>0 —*</td>
<td>1 (0.6)</td>
</tr>
<tr>
<td>&gt;8</td>
<td>4 (0.9)</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 —*</td>
<td>1 (0.5)</td>
<td>0 (0.2)</td>
<td>4 (0.9)</td>
</tr>
</tbody>
</table>

* No teachers in the sample selected this response option. Thus, it is not possible to calculate the standard error of this estimate.

† Questionnaire responses for Quarter Courses have been translated into Semester Courses.

### Table MTQ 6.2
**Number of College Semester Courses Completed by Grade 5–8 Mathematics Teachers**

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Mathematics education</th>
<th>Calculus</th>
<th>Statistics</th>
<th>Advanced calculus</th>
<th>All other mathematics courses</th>
<th>Computer science</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9 (1.7)</td>
<td>69 (2.5)</td>
<td>46 (3.3)</td>
<td>88 (1.6)</td>
<td>0 (0.2)</td>
<td>40 (3.2)</td>
<td>10 (1.9)</td>
</tr>
<tr>
<td>1</td>
<td>21 (2.6)</td>
<td>11 (1.7)</td>
<td>35 (2.8)</td>
<td>7 (1.4)</td>
<td>20 (3.2)</td>
<td>26 (3.3)</td>
<td>12 (1.9)</td>
</tr>
<tr>
<td>2</td>
<td>24 (2.8)</td>
<td>9 (1.3)</td>
<td>12 (1.8)</td>
<td>4 (0.6)</td>
<td>20 (2.5)</td>
<td>17 (2.8)</td>
<td>24 (3.2)</td>
</tr>
<tr>
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<td>15 (2.0)</td>
<td>4 (0.7)</td>
<td>4 (1.0)</td>
<td>1 (0.3)</td>
<td>15 (2.3)</td>
<td>8 (2.0)</td>
<td>19 (2.4)</td>
</tr>
<tr>
<td>4</td>
<td>10 (1.6)</td>
<td>3 (0.7)</td>
<td>2 (0.5)</td>
<td>0 (0.1)</td>
<td>9 (1.6)</td>
<td>2 (0.5)</td>
<td>13 (2.6)</td>
</tr>
<tr>
<td>5</td>
<td>4 (1.8)</td>
<td>0 (0.2)</td>
<td>0 (0.0)</td>
<td>0 (0.1)</td>
<td>7 (1.1)</td>
<td>2 (0.7)</td>
<td>6 (1.2)</td>
</tr>
<tr>
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<td>6 (1.2)</td>
<td>2 (1.1)</td>
<td>1 (0.3)</td>
<td>0 (0.1)</td>
<td>6 (1.2)</td>
<td>2 (1.0)</td>
<td>4 (1.3)</td>
</tr>
<tr>
<td>7</td>
<td>1 (1.1)</td>
<td>0 (1.0)</td>
<td>0 (0.0)</td>
<td>0 —*</td>
<td>5 (1.3)</td>
<td>0 (0.2)</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>8</td>
<td>2 (0.9)</td>
<td>0 (0.1)</td>
<td>0 (0.1)</td>
<td>0 —*</td>
<td>6 (1.5)</td>
<td>1 (0.4)</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>&gt;8</td>
<td>8 (1.9)</td>
<td>1 (0.2)</td>
<td>0 (0.1)</td>
<td>0 (0.1)</td>
<td>12 (1.6)</td>
<td>2 (0.6)</td>
<td>11 (2.3)</td>
</tr>
</tbody>
</table>

* No teachers in the sample selected this response option. Thus, it is not possible to calculate the standard error of this estimate.

† Questionnaire responses for Quarter Courses have been translated into Semester Courses.
### Table MTQ 6.3
Number of College Semester† Courses Completed by Grade 9–12 Mathematics Teachers

<table>
<thead>
<tr>
<th>Mathematics education</th>
<th>Calculus</th>
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<th>Advanced calculus</th>
<th>All other mathematics courses</th>
<th>Computer science</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>17 (1.7)</td>
<td>4 (0.9)</td>
<td>12 (1.4)</td>
<td>37 (2.2)</td>
<td>1 (0.7)</td>
<td>21 (1.7)</td>
</tr>
<tr>
<td>1</td>
<td>17 (1.4)</td>
<td>8 (1.0)</td>
<td>46 (2.1)</td>
<td>34 (1.9)</td>
<td>1 (0.4)</td>
<td>25 (1.8)</td>
</tr>
<tr>
<td>2</td>
<td>21 (1.5)</td>
<td>24 (2.0)</td>
<td>23 (1.8)</td>
<td>17 (1.4)</td>
<td>2 (0.6)</td>
<td>23 (2.2)</td>
</tr>
<tr>
<td>3</td>
<td>10 (1.0)</td>
<td>29 (1.8)</td>
<td>10 (1.3)</td>
<td>5 (0.7)</td>
<td>2 (0.5)</td>
<td>11 (1.0)</td>
</tr>
<tr>
<td>4</td>
<td>10 (1.2)</td>
<td>18 (1.6)</td>
<td>4 (0.8)</td>
<td>3 (0.4)</td>
<td>4 (1.0)</td>
<td>6 (0.8)</td>
</tr>
<tr>
<td>5</td>
<td>3 (0.7)</td>
<td>4 (1.2)</td>
<td>1 (0.2)</td>
<td>0 (0.2)</td>
<td>5 (0.9)</td>
<td>2 (0.4)</td>
</tr>
<tr>
<td>6</td>
<td>8 (1.1)</td>
<td>4 (0.6)</td>
<td>2 (0.4)</td>
<td>1 (0.3)</td>
<td>12 (1.5)</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>7</td>
<td>1 (0.5)</td>
<td>1 (0.3)</td>
<td>0 (0.1)</td>
<td>0 (0.1)</td>
<td>10 (1.1)</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>8</td>
<td>1 (0.3)</td>
<td>2 (0.5)</td>
<td>0 (0.2)</td>
<td>1 (0.3)</td>
<td>10 (1.2)</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>&gt;8</td>
<td>12 (1.1)</td>
<td>6 (0.8)</td>
<td>1 (0.4)</td>
<td>1 (0.4)</td>
<td>52 (1.9)</td>
<td>5 (0.8)</td>
</tr>
</tbody>
</table>

† Questionnaire responses for Quarter Courses have been translated into Semester Courses.
### Table MTQ 7a
#### Percentage of Mathematics Courses Completed by Mathematics Teachers at a Two-Year College/Community College/Technical School

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>73 (2.2)</td>
<td>72 (3.0)</td>
<td>77 (2.1)</td>
</tr>
<tr>
<td>10%</td>
<td>4 (0.9)</td>
<td>4 (0.9)</td>
<td>8 (1.3)</td>
</tr>
<tr>
<td>20%</td>
<td>3 (0.8)</td>
<td>4 (1.3)</td>
<td>4 (0.7)</td>
</tr>
<tr>
<td>30%</td>
<td>3 (0.9)</td>
<td>2 (0.8)</td>
<td>3 (0.7)</td>
</tr>
<tr>
<td>40%</td>
<td>1 (0.3)</td>
<td>3 (1.1)</td>
<td>4 (1.2)</td>
</tr>
<tr>
<td>50%</td>
<td>11 (1.7)</td>
<td>9 (2.3)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>60%</td>
<td>2 (0.6)</td>
<td>2 (0.8)</td>
<td>0 (0.3)</td>
</tr>
<tr>
<td>70%</td>
<td>1 (0.6)</td>
<td>1 (0.3)</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>80%</td>
<td>2 (0.7)</td>
<td>0 (0.2)</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>90%</td>
<td>0 (0.2)</td>
<td>0 (0.3)</td>
<td>0 (0.4)</td>
</tr>
<tr>
<td>100%</td>
<td>1 (0.6)</td>
<td>3 (1.7)</td>
<td>0 (0.2)</td>
</tr>
</tbody>
</table>

### Table MTQ 7b
#### Percentage of Mathematics Courses Completed by Mathematics Teachers at a Four-Year College/University

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>1 (0.6)</td>
<td>3 (1.7)</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>10%</td>
<td>0 (0.2)</td>
<td>0 (0.3)</td>
<td>0 (0.4)</td>
</tr>
<tr>
<td>20%</td>
<td>2 (0.7)</td>
<td>0 (0.2)</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>30%</td>
<td>1 (0.6)</td>
<td>1 (0.3)</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>40%</td>
<td>2 (0.6)</td>
<td>2 (0.8)</td>
<td>0 (0.3)</td>
</tr>
<tr>
<td>50%</td>
<td>11 (1.6)</td>
<td>9 (2.3)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>60%</td>
<td>1 (0.3)</td>
<td>2 (1.0)</td>
<td>4 (1.2)</td>
</tr>
<tr>
<td>70%</td>
<td>3 (0.9)</td>
<td>3 (0.8)</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>80%</td>
<td>3 (0.8)</td>
<td>4 (1.3)</td>
<td>4 (0.7)</td>
</tr>
<tr>
<td>90%</td>
<td>4 (0.8)</td>
<td>5 (0.9)</td>
<td>8 (1.3)</td>
</tr>
<tr>
<td>100%</td>
<td>73 (2.2)</td>
<td>72 (3.0)</td>
<td>77 (2.1)</td>
</tr>
</tbody>
</table>
### Table MTQ 8
**Mathematics Teachers’ Most Recent College Coursework in Mathematics or The Teaching of Mathematics**

<table>
<thead>
<tr>
<th></th>
<th>Percent of Teachers</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mathematics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996–2000</td>
<td>24 (1.8)</td>
<td>23 (3.0)</td>
<td>30 (2.2)</td>
<td></td>
</tr>
<tr>
<td>1990–1995</td>
<td>24 (2.0)</td>
<td>29 (3.3)</td>
<td>26 (1.8)</td>
<td></td>
</tr>
<tr>
<td>Prior to 1990</td>
<td>52 (2.2)</td>
<td>48 (3.8)</td>
<td>44 (1.8)</td>
<td></td>
</tr>
<tr>
<td><strong>The Teaching of Mathematics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996–2000</td>
<td>29 (2.2)</td>
<td>28 (3.0)</td>
<td>28 (1.9)</td>
<td></td>
</tr>
<tr>
<td>1990–1995</td>
<td>24 (2.1)</td>
<td>21 (2.7)</td>
<td>21 (1.5)</td>
<td></td>
</tr>
<tr>
<td>Prior to 1990</td>
<td>40 (2.1)</td>
<td>39 (3.8)</td>
<td>37 (2.0)</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>7 (1.2)</td>
<td>11 (2.0)</td>
<td>14 (1.6)</td>
<td></td>
</tr>
</tbody>
</table>

### Table MTQ 9
**Time Spent by Mathematics Teachers on In-Service Education in Mathematics or The Teaching of Mathematics**

<table>
<thead>
<tr>
<th></th>
<th>Percent of Teachers</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In Last 12 Months</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>30 (2.3)</td>
<td>26 (3.1)</td>
<td>13 (1.6)</td>
<td></td>
</tr>
<tr>
<td>Less than 6 hours</td>
<td>34 (2.2)</td>
<td>25 (3.0)</td>
<td>21 (1.5)</td>
<td></td>
</tr>
<tr>
<td>6–15 hours</td>
<td>24 (2.5)</td>
<td>30 (2.4)</td>
<td>32 (2.0)</td>
<td></td>
</tr>
<tr>
<td>16–35 hours</td>
<td>8 (1.2)</td>
<td>10 (1.7)</td>
<td>20 (1.3)</td>
<td></td>
</tr>
<tr>
<td>More than 35 hours</td>
<td>4 (1.0)</td>
<td>9 (1.6)</td>
<td>15 (1.6)</td>
<td></td>
</tr>
<tr>
<td><strong>In Last 3 Years</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>14 (1.7)</td>
<td>14 (3.3)</td>
<td>7 (1.3)</td>
<td></td>
</tr>
<tr>
<td>Less than 6 hours</td>
<td>22 (2.2)</td>
<td>15 (2.7)</td>
<td>8 (1.4)</td>
<td></td>
</tr>
<tr>
<td>6–15 hours</td>
<td>32 (2.2)</td>
<td>29 (3.0)</td>
<td>17 (1.7)</td>
<td></td>
</tr>
<tr>
<td>16–35 hours</td>
<td>18 (1.7)</td>
<td>19 (2.3)</td>
<td>25 (1.8)</td>
<td></td>
</tr>
<tr>
<td>More than 35 hours</td>
<td>14 (1.7)</td>
<td>23 (2.5)</td>
<td>43 (2.2)</td>
<td></td>
</tr>
<tr>
<td>Table MTQ 10</td>
<td>Mathematics Teachers Participating in Various Professional Activities in Last Twelve Months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percent of Teachers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grades K–4</td>
<td>Grades 5–8</td>
<td>Grades 9–12</td>
<td></td>
</tr>
<tr>
<td>Taught any in-service workshops in mathematics or mathematics teaching</td>
<td>4 (0.9)</td>
<td>13 (2.0)</td>
<td>14 (1.2)</td>
<td></td>
</tr>
<tr>
<td>Mentored another teacher as part of a formal arrangement that is recognized or supported by the school or district, not including supervision of student teachers</td>
<td>16 (1.6)</td>
<td>17 (2.1)</td>
<td>19 (1.4)</td>
<td></td>
</tr>
<tr>
<td>Received any local, state, or national grants or awards for mathematics teaching</td>
<td>2 (0.7)</td>
<td>4 (0.9)</td>
<td>7 (0.8)</td>
<td></td>
</tr>
<tr>
<td>Served on a school or district mathematics curriculum committee</td>
<td>14 (1.5)</td>
<td>29 (2.5)</td>
<td>38 (2.1)</td>
<td></td>
</tr>
<tr>
<td>Served on a school or district mathematics textbook selection committee</td>
<td>15 (1.8)</td>
<td>28 (3.0)</td>
<td>41 (2.2)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table MTQ 11</th>
<th>Mathematics Teachers Participating in Various Professional Development Activities in Past Three Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of Teachers</td>
</tr>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>Taken a formal college/university mathematics course</td>
<td>11 (1.3)</td>
</tr>
<tr>
<td>Taken a formal college/university course in the teaching of mathematics</td>
<td>18 (2.0)</td>
</tr>
<tr>
<td>Observed other teachers teaching mathematics as part of your own professional development</td>
<td>45 (2.3)</td>
</tr>
<tr>
<td>Met with a local group teachers on a regular basis to study/discuss mathematics teaching issues on a regular basis</td>
<td>35 (1.9)</td>
</tr>
<tr>
<td>Collaborated on mathematics teaching issues with a group of teachers at a distance using telecommunications</td>
<td>5 (1.0)</td>
</tr>
<tr>
<td>Served as a mentor and/or peer coach in mathematics teaching, as part of a formal arrangement that is recognized or supported by the school or district</td>
<td>13 (1.7)</td>
</tr>
<tr>
<td>Attended a workshop on mathematics teaching</td>
<td>68 (2.6)</td>
</tr>
<tr>
<td>Attended a national or state mathematics teacher association meeting</td>
<td>7 (1.4)</td>
</tr>
<tr>
<td>Applied or applying for certification from the National Board for Professional Teaching Standards (NBPTS)</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Received certification from the National Board for Professional Teaching Standards (NBPTS)</td>
<td>2 (0.6)</td>
</tr>
</tbody>
</table>
### Table MTQ 12a.1
**Grade K–4 Mathematics Teachers’ Opinions of Their Need for Professional Development Three Years Ago**

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>None Needed</th>
<th>Minor Need</th>
<th>Moderate Need</th>
<th>Substantial Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>15 (1.7)</td>
<td>40 (2.1)</td>
<td>36 (1.9)</td>
<td>9 (1.2)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>11 (1.7)</td>
<td>43 (2.4)</td>
<td>36 (2.1)</td>
<td>10 (1.3)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>7 (1.4)</td>
<td>31 (2.5)</td>
<td>44 (2.5)</td>
<td>18 (1.8)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>3 (1.0)</td>
<td>17 (1.9)</td>
<td>44 (2.7)</td>
<td>35 (2.2)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>16 (1.7)</td>
<td>37 (2.3)</td>
<td>39 (2.2)</td>
<td>8 (1.3)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>9 (1.5)</td>
<td>33 (2.4)</td>
<td>35 (2.5)</td>
<td>22 (2.0)</td>
</tr>
</tbody>
</table>

### Table MTQ 12a.2
**Grade 5–8 Mathematics Teachers’ Opinions of Their Need for Professional Development Three Years Ago**

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>None Needed</th>
<th>Minor Need</th>
<th>Moderate Need</th>
<th>Substantial Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>19 (2.9)</td>
<td>41 (3.1)</td>
<td>34 (2.8)</td>
<td>6 (1.3)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>14 (3.4)</td>
<td>35 (2.9)</td>
<td>44 (3.5)</td>
<td>7 (1.6)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>8 (2.4)</td>
<td>30 (2.7)</td>
<td>46 (3.1)</td>
<td>17 (3.0)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>3 (1.1)</td>
<td>14 (1.9)</td>
<td>49 (3.2)</td>
<td>34 (3.6)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>18 (3.2)</td>
<td>42 (3.0)</td>
<td>31 (3.0)</td>
<td>9 (1.8)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>8 (1.9)</td>
<td>32 (3.1)</td>
<td>40 (2.8)</td>
<td>20 (3.2)</td>
</tr>
</tbody>
</table>

### Table MTQ 12a.3
**Grade 9–12 Mathematics Teachers’ Opinions of Their Need for Professional Development Three Years Ago**

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>None Needed</th>
<th>Minor Need</th>
<th>Moderate Need</th>
<th>Substantial Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>21 (1.4)</td>
<td>48 (2.4)</td>
<td>27 (2.3)</td>
<td>5 (1.4)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>15 (1.5)</td>
<td>45 (2.3)</td>
<td>33 (2.3)</td>
<td>7 (1.5)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>9 (0.8)</td>
<td>38 (2.2)</td>
<td>43 (1.9)</td>
<td>11 (1.4)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>5 (1.3)</td>
<td>28 (1.8)</td>
<td>41 (1.8)</td>
<td>26 (1.9)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>16 (1.5)</td>
<td>51 (1.9)</td>
<td>27 (1.8)</td>
<td>5 (0.9)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>7 (0.8)</td>
<td>38 (2.3)</td>
<td>38 (2.0)</td>
<td>17 (1.6)</td>
</tr>
</tbody>
</table>
### Table MTQ 12b.1
Grade K–4 Mathematics Teachers’ Opinions of Professional Development Emphasis

<table>
<thead>
<tr>
<th>Professional Development Emphasis</th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
</tr>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>24 (2.4)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>15 (1.8)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>18 (1.8)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>24 (2.0)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>17 (1.7)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>31 (2.1)</td>
</tr>
</tbody>
</table>

### Table MTQ 12b.2
Grade 5–8 Mathematics Teachers’ Opinions of Professional Development Emphasis

<table>
<thead>
<tr>
<th>Professional Development Emphasis</th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
</tr>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>28 (3.5)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>13 (2.4)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>18 (2.7)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>20 (3.0)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>13 (2.3)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>30 (3.6)</td>
</tr>
<tr>
<td>Professional Development Emphasis</td>
<td>Percent of Teachers</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
</tr>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>31 (2.0)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>18 (1.7)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>16 (1.8)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>10 (1.6)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>18 (1.9)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>36 (1.9)</td>
</tr>
</tbody>
</table>
### Table MTQ 12c.1
Grade K–4 Mathematics Teachers Rating
Impact of Their Professional Development

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Little or no impact</th>
<th>Confirmed what I was already doing</th>
<th>Caused me to change my teaching practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>32 (2.4)</td>
<td>52 (3.0)</td>
<td>15 (1.9)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>24 (2.2)</td>
<td>55 (2.6)</td>
<td>21 (1.9)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>32 (2.3)</td>
<td>40 (2.5)</td>
<td>28 (2.3)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>52 (2.4)</td>
<td>27 (2.4)</td>
<td>21 (2.2)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>28 (2.2)</td>
<td>53 (2.8)</td>
<td>19 (2.0)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>47 (2.4)</td>
<td>40 (2.4)</td>
<td>13 (1.7)</td>
</tr>
</tbody>
</table>

### Table MTQ 12c.2
Grade 5–8 Mathematics Teachers Rating
Impact of Their Professional Development

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Little or no impact</th>
<th>Confirmed what I was already doing</th>
<th>Caused me to change my teaching practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>31 (2.8)</td>
<td>55 (3.0)</td>
<td>13 (2.3)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>22 (2.9)</td>
<td>59 (3.3)</td>
<td>20 (2.8)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>32 (3.2)</td>
<td>42 (3.0)</td>
<td>26 (3.0)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>46 (3.3)</td>
<td>28 (2.7)</td>
<td>26 (2.4)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>28 (2.9)</td>
<td>54 (3.2)</td>
<td>18 (2.1)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>48 (3.2)</td>
<td>37 (3.3)</td>
<td>15 (2.5)</td>
</tr>
</tbody>
</table>

### Table MTQ 12c.3
Grade 9–12 Mathematics Teachers Rating
Impact of Their Professional Development

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Little or no impact</th>
<th>Confirmed what I was already doing</th>
<th>Caused me to change my teaching practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepening my own mathematics content knowledge</td>
<td>38 (1.8)</td>
<td>50 (2.1)</td>
<td>12 (1.5)</td>
</tr>
<tr>
<td>Understanding student thinking in mathematics</td>
<td>34 (2.1)</td>
<td>53 (2.3)</td>
<td>14 (1.5)</td>
</tr>
<tr>
<td>Learning how to use inquiry/investigation-oriented teaching strategies</td>
<td>35 (2.1)</td>
<td>44 (2.0)</td>
<td>22 (1.6)</td>
</tr>
<tr>
<td>Learning how to use technology in mathematics instruction</td>
<td>30 (1.9)</td>
<td>32 (1.9)</td>
<td>39 (2.0)</td>
</tr>
<tr>
<td>Learning how to assess student learning in mathematics</td>
<td>33 (2.2)</td>
<td>52 (2.0)</td>
<td>15 (1.2)</td>
</tr>
<tr>
<td>Learning how to teach mathematics in a class that includes students with special needs</td>
<td>57 (2.1)</td>
<td>31 (1.9)</td>
<td>12 (1.2)</td>
</tr>
</tbody>
</table>
### Table MTQ 13a
**Mathematics Teachers in Self-Contained Classrooms**

<table>
<thead>
<tr>
<th>Grades</th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>K–4</td>
<td>95 (0.8)</td>
</tr>
<tr>
<td>5–8</td>
<td>51 (3.9)</td>
</tr>
<tr>
<td>9–12</td>
<td>5 (1.2)</td>
</tr>
</tbody>
</table>

### Table MTQ 13b
**Grade K–4 Mathematics Teachers in Self-Contained Classrooms Perceptions of Their Qualifications**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Not Well Qualified</th>
<th>Adequately Qualified</th>
<th>Very Well Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life science</td>
<td>10 (1.4)</td>
<td>60 (2.4)</td>
<td>31 (2.3)</td>
</tr>
<tr>
<td>Earth science</td>
<td>9 (1.4)</td>
<td>64 (2.3)</td>
<td>26 (2.3)</td>
</tr>
<tr>
<td>Physical science</td>
<td>16 (1.9)</td>
<td>63 (2.4)</td>
<td>21 (2.0)</td>
</tr>
<tr>
<td>Mathematics</td>
<td>1 (0.4)</td>
<td>46 (2.4)</td>
<td>53 (2.4)</td>
</tr>
<tr>
<td>Reading/Language Arts</td>
<td>0 (0.2)</td>
<td>22 (2.0)</td>
<td>77 (2.0)</td>
</tr>
<tr>
<td>Social Studies</td>
<td>2 (0.6)</td>
<td>48 (2.3)</td>
<td>51 (2.3)</td>
</tr>
</tbody>
</table>

### Table MTQ 13c
**Number of Days per Week and Minutes per Day Grade K–4 Self-Contained Mathematics Classes Spend on Various Subjects**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Average Number of Days per Week</th>
<th>Average Number of Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>4.9 (0.0)</td>
<td>55 (1.0)</td>
</tr>
<tr>
<td>Science</td>
<td>3.0 (0.1)</td>
<td>22 (0.7)</td>
</tr>
<tr>
<td>Social Studies</td>
<td>3.1 (0.1)</td>
<td>23 (0.9)</td>
</tr>
<tr>
<td>Reading/Language Arts</td>
<td>5.0 (0.0)</td>
<td>106 (2.4)</td>
</tr>
</tbody>
</table>

### Table MTQ 14
**Mathematics Teachers in Non-Self-Contained Classrooms Descriptions of Their Class Organization**

<table>
<thead>
<tr>
<th>Class Organization</th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades K–4</td>
<td>Grades 5–8</td>
</tr>
<tr>
<td>Departmentalized Instruction</td>
<td>33 (11.4)</td>
</tr>
<tr>
<td>Elementary Enrichment Class</td>
<td>16 (6.9)</td>
</tr>
<tr>
<td>Team Teaching</td>
<td>51 (11.3)</td>
</tr>
</tbody>
</table>

* No teachers in the sample selected this response option. Thus, it is not possible to calculate the standard error of this estimate.
There is no table for STQ 15a.1.

**Table MTQ 15a.2**

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Not Well Qualified</th>
<th>Adequately Qualified</th>
<th>Very Well Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numeration and number theory</td>
<td>1 (0.5)</td>
<td>23 (3.4)</td>
<td>76 (3.4)</td>
</tr>
<tr>
<td>Computation</td>
<td>0 (0.1)</td>
<td>10 (1.9)</td>
<td>90 (1.9)</td>
</tr>
<tr>
<td>Estimation</td>
<td>0 (0.1)</td>
<td>17 (2.8)</td>
<td>83 (2.8)</td>
</tr>
<tr>
<td>Measurement</td>
<td>1 (0.5)</td>
<td>19 (3.0)</td>
<td>80 (3.1)</td>
</tr>
<tr>
<td>Pre-algebra</td>
<td>3 (1.4)</td>
<td>22 (3.8)</td>
<td>75 (4.0)</td>
</tr>
<tr>
<td>Algebra</td>
<td>12 (2.3)</td>
<td>40 (4.0)</td>
<td>49 (3.6)</td>
</tr>
<tr>
<td>Patterns and relationships</td>
<td>1 (0.5)</td>
<td>27 (3.8)</td>
<td>72 (3.8)</td>
</tr>
<tr>
<td>Geometry and spatial sense</td>
<td>3 (0.8)</td>
<td>41 (4.2)</td>
<td>57 (4.3)</td>
</tr>
<tr>
<td>Functions and pre-calculus concepts</td>
<td>50 (3.9)</td>
<td>31 (3.4)</td>
<td>18 (2.2)</td>
</tr>
<tr>
<td>Data collection and analysis</td>
<td>3 (0.7)</td>
<td>42 (3.4)</td>
<td>55 (3.5)</td>
</tr>
<tr>
<td>Probability</td>
<td>5 (1.2)</td>
<td>50 (3.1)</td>
<td>45 (3.0)</td>
</tr>
<tr>
<td>Statistics</td>
<td>41 (4.1)</td>
<td>42 (4.1)</td>
<td>18 (2.3)</td>
</tr>
<tr>
<td>Topics from discrete mathematics</td>
<td>61 (3.9)</td>
<td>31 (4.0)</td>
<td>8 (1.8)</td>
</tr>
<tr>
<td>Mathematical structures</td>
<td>68 (4.1)</td>
<td>25 (3.9)</td>
<td>7 (1.9)</td>
</tr>
<tr>
<td>Calculus</td>
<td>78 (2.4)</td>
<td>18 (2.4)</td>
<td>4 (0.9)</td>
</tr>
<tr>
<td>Technology in support of mathematics</td>
<td>35 (3.7)</td>
<td>47 (4.4)</td>
<td>18 (2.4)</td>
</tr>
</tbody>
</table>

**Table MTQ 15a.3**

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
<th>Not Well Qualified</th>
<th>Adequately Qualified</th>
<th>Very Well Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numeration and number theory</td>
<td>6 (0.7)</td>
<td>30 (2.1)</td>
<td>64 (2.2)</td>
</tr>
<tr>
<td>Computation</td>
<td>1 (0.2)</td>
<td>11 (1.4)</td>
<td>88 (1.5)</td>
</tr>
<tr>
<td>Estimation</td>
<td>1 (0.2)</td>
<td>14 (1.6)</td>
<td>85 (1.7)</td>
</tr>
<tr>
<td>Measurement</td>
<td>1 (0.2)</td>
<td>14 (1.7)</td>
<td>85 (1.7)</td>
</tr>
<tr>
<td>Pre-algebra</td>
<td>1 (0.2)</td>
<td>5 (1.0)</td>
<td>94 (1.1)</td>
</tr>
<tr>
<td>Algebra</td>
<td>0 (0.2)</td>
<td>5 (1.1)</td>
<td>94 (1.1)</td>
</tr>
<tr>
<td>Patterns and relationships</td>
<td>1 (0.3)</td>
<td>24 (1.9)</td>
<td>75 (2.0)</td>
</tr>
<tr>
<td>Geometry and spatial sense</td>
<td>4 (0.8)</td>
<td>26 (2.0)</td>
<td>70 (2.3)</td>
</tr>
<tr>
<td>Functions and pre-calculus concepts</td>
<td>6 (0.9)</td>
<td>34 (2.0)</td>
<td>61 (2.0)</td>
</tr>
<tr>
<td>Data collection and analysis</td>
<td>9 (1.1)</td>
<td>45 (2.5)</td>
<td>46 (2.5)</td>
</tr>
<tr>
<td>Probability</td>
<td>10 (1.2)</td>
<td>48 (1.9)</td>
<td>42 (2.0)</td>
</tr>
<tr>
<td>Statistics</td>
<td>23 (1.6)</td>
<td>51 (2.2)</td>
<td>26 (2.0)</td>
</tr>
<tr>
<td>Topics from discrete mathematics</td>
<td>43 (1.8)</td>
<td>41 (1.7)</td>
<td>16 (1.5)</td>
</tr>
<tr>
<td>Mathematical structures</td>
<td>47 (2.1)</td>
<td>41 (1.9)</td>
<td>12 (1.4)</td>
</tr>
<tr>
<td>Calculus</td>
<td>39 (1.9)</td>
<td>36 (2.0)</td>
<td>24 (1.8)</td>
</tr>
<tr>
<td>Technology in support of mathematics</td>
<td>23 (1.9)</td>
<td>48 (2.1)</td>
<td>29 (2.1)</td>
</tr>
</tbody>
</table>
There is no table for MTQ 15b.

There is no table for MTQ 16.

There is no table for MTQ 17a.

There is no table for MTQ 17b.

Table MTQ 18a
Average Number of Students in Mathematics Classes

<table>
<thead>
<tr>
<th>Grades</th>
<th>Average Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades K–4</td>
<td>22.0 (0.3)</td>
</tr>
<tr>
<td>Grades 5–8</td>
<td>22.9 (0.5)</td>
</tr>
<tr>
<td>Grades 9–12</td>
<td>21.4 (0.3)</td>
</tr>
</tbody>
</table>

Table MTQ 18b
Race/Ethnicity of Students in Mathematics Classes

<table>
<thead>
<tr>
<th>Percent of Students</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaskan Native</td>
<td>1 (0.4)</td>
<td>1 (0.4)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Asian</td>
<td>4 (0.9)</td>
<td>3 (0.5)</td>
<td>4 (0.5)</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>15 (1.8)</td>
<td>16 (1.8)</td>
<td>13 (1.1)</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>14 (1.8)</td>
<td>11 (1.2)</td>
<td>11 (0.9)</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>0 (0.1)</td>
<td>1 (0.3)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>White</td>
<td>66 (2.6)</td>
<td>68 (2.3)</td>
<td>70 (1.7)</td>
</tr>
</tbody>
</table>

There is no table for MTQ 19a.

Table MTQ 19b
Calendar Duration of Mathematics Classes

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>97 (3.0)</td>
<td>95 (1.7)</td>
<td>75 (1.8)</td>
</tr>
<tr>
<td>Semester</td>
<td>3 (3.0)</td>
<td>4 (1.7)</td>
<td>24 (1.7)</td>
</tr>
<tr>
<td>Quarter</td>
<td>0 (0.0)</td>
<td>1 (0.4)</td>
<td>1 (0.6)</td>
</tr>
</tbody>
</table>
### Table MTQ 20
**Students Assigned to Mathematics Classes by Ability Level**

<table>
<thead>
<tr>
<th></th>
<th>Grades K–4</th>
<th></th>
<th>Grades 5–8</th>
<th></th>
<th>Grades 9–12</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>10 (1.6)</td>
<td>46 (2.2)</td>
<td>65 (2.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table MTQ 21
**Ability Grouping of Students in Mathematics Classes**

<table>
<thead>
<tr>
<th></th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairly homogeneous and low in ability</td>
<td>6 (1.2)</td>
<td>12 (1.4)</td>
<td>17 (1.3)</td>
</tr>
<tr>
<td>Fairly homogeneous and average in ability</td>
<td>21 (1.9)</td>
<td>26 (2.1)</td>
<td>31 (1.6)</td>
</tr>
<tr>
<td>Fairly homogeneous and high in ability</td>
<td>5 (1.0)</td>
<td>18 (2.1)</td>
<td>26 (1.8)</td>
</tr>
<tr>
<td>Heterogeneous, with a mixture of two or more ability levels</td>
<td>68 (2.2)</td>
<td>44 (2.4)</td>
<td>26 (1.9)</td>
</tr>
</tbody>
</table>

### Table MTQ 22
**Mathematics Classes with One or More Students with Special Needs**

<table>
<thead>
<tr>
<th></th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited English Proficiency</td>
<td>34 (3.0)</td>
<td>20 (1.7)</td>
<td>16 (1.3)</td>
</tr>
<tr>
<td>Learning Disabled</td>
<td>47 (2.3)</td>
<td>47 (2.6)</td>
<td>31 (1.8)</td>
</tr>
<tr>
<td>Mentally Handicapped</td>
<td>7 (1.3)</td>
<td>2 (0.5)</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>Physically Handicapped</td>
<td>6 (1.0)</td>
<td>4 (0.9)</td>
<td>4 (0.6)</td>
</tr>
</tbody>
</table>
### Table MTQ 23.1
**Emphasis Given in Grade K–4 Mathematics**
**Classes to Various Instructional Objectives**

<table>
<thead>
<tr>
<th></th>
<th>Percent of Classes</th>
<th>None</th>
<th>Minimal Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase students’ interest in mathematics</td>
<td>0 (0.2)</td>
<td>4 (0.9)</td>
<td>43 (2.5)</td>
<td>53 (2.5)</td>
<td></td>
</tr>
<tr>
<td>Learn mathematical concepts</td>
<td>0 (0.2)</td>
<td>1 (0.5)</td>
<td>11 (1.3)</td>
<td>88 (1.4)</td>
<td></td>
</tr>
<tr>
<td>Learn mathematical algorithms/procedures</td>
<td>8 (1.3)</td>
<td>15 (1.8)</td>
<td>36 (2.1)</td>
<td>41 (2.1)</td>
<td></td>
</tr>
<tr>
<td>Develop students’ computational skills</td>
<td>1 (0.4)</td>
<td>5 (0.8)</td>
<td>30 (2.2)</td>
<td>64 (2.3)</td>
<td></td>
</tr>
<tr>
<td>Learn how to solve problems</td>
<td>0 (0.2)</td>
<td>2 (0.6)</td>
<td>18 (1.7)</td>
<td>80 (1.8)</td>
<td></td>
</tr>
<tr>
<td>Learn to reason mathematically</td>
<td>0 (0.2)</td>
<td>4 (1.1)</td>
<td>30 (2.2)</td>
<td>66 (2.2)</td>
<td></td>
</tr>
<tr>
<td>Learn how mathematics ideas connect with one another</td>
<td>1 (0.4)</td>
<td>9 (1.4)</td>
<td>34 (2.5)</td>
<td>57 (2.3)</td>
<td></td>
</tr>
<tr>
<td>Prepare for further study in mathematics</td>
<td>2 (0.7)</td>
<td>12 (1.7)</td>
<td>42 (2.5)</td>
<td>44 (2.4)</td>
<td></td>
</tr>
<tr>
<td>Understand the logical structure of mathematics</td>
<td>4 (1.0)</td>
<td>21 (1.8)</td>
<td>48 (2.6)</td>
<td>27 (2.3)</td>
<td></td>
</tr>
<tr>
<td>Learn about the history and nature of mathematics</td>
<td>28 (2.1)</td>
<td>55 (2.4)</td>
<td>15 (1.6)</td>
<td>3 (0.7)</td>
<td></td>
</tr>
<tr>
<td>Learn to explain ideas in mathematics effectively</td>
<td>2 (0.8)</td>
<td>18 (2.1)</td>
<td>46 (2.3)</td>
<td>34 (2.1)</td>
<td></td>
</tr>
<tr>
<td>Learn how to apply mathematics in business and industry</td>
<td>27 (2.1)</td>
<td>41 (2.5)</td>
<td>22 (1.9)</td>
<td>10 (1.4)</td>
<td></td>
</tr>
<tr>
<td>Learn to perform computations with speed and accuracy</td>
<td>7 (1.1)</td>
<td>14 (1.6)</td>
<td>40 (2.3)</td>
<td>39 (2.3)</td>
<td></td>
</tr>
<tr>
<td>Prepare for standardized tests</td>
<td>7 (0.9)</td>
<td>20 (2.1)</td>
<td>37 (2.4)</td>
<td>36 (2.5)</td>
<td></td>
</tr>
</tbody>
</table>

### Table MTQ 23.2
**Emphasis Given in Grade 5–8 Mathematics**
**Classes to Various Instructional Objectives**

<table>
<thead>
<tr>
<th></th>
<th>Percent of Classes</th>
<th>None</th>
<th>Minimal Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase students’ interest in mathematics</td>
<td>0 (0.1)</td>
<td>9 (2.0)</td>
<td>48 (2.8)</td>
<td>43 (2.4)</td>
<td></td>
</tr>
<tr>
<td>Learn mathematical concepts</td>
<td>0 (0.0)</td>
<td>0 (0.2)</td>
<td>12 (1.9)</td>
<td>88 (1.9)</td>
<td></td>
</tr>
<tr>
<td>Learn mathematical algorithms/procedures</td>
<td>2 (0.6)</td>
<td>8 (1.4)</td>
<td>35 (2.7)</td>
<td>55 (2.7)</td>
<td></td>
</tr>
<tr>
<td>Develop students’ computational skills</td>
<td>1 (0.6)</td>
<td>11 (1.9)</td>
<td>27 (2.1)</td>
<td>61 (2.4)</td>
<td></td>
</tr>
<tr>
<td>Learn how to solve problems</td>
<td>0 (0.0)</td>
<td>0 (0.2)</td>
<td>18 (2.2)</td>
<td>82 (2.2)</td>
<td></td>
</tr>
<tr>
<td>Learn to reason mathematically</td>
<td>0 (0.0)</td>
<td>3 (0.9)</td>
<td>26 (2.4)</td>
<td>72 (2.6)</td>
<td></td>
</tr>
<tr>
<td>Learn how mathematics ideas connect with one another</td>
<td>0 (0.2)</td>
<td>4 (0.9)</td>
<td>37 (2.1)</td>
<td>59 (2.3)</td>
<td></td>
</tr>
<tr>
<td>Prepare for further study in mathematics</td>
<td>2 (0.6)</td>
<td>9 (1.4)</td>
<td>39 (2.1)</td>
<td>50 (2.2)</td>
<td></td>
</tr>
<tr>
<td>Understand the logical structure of mathematics</td>
<td>1 (0.2)</td>
<td>18 (2.2)</td>
<td>48 (2.7)</td>
<td>33 (2.3)</td>
<td></td>
</tr>
<tr>
<td>Learn about the history and nature of mathematics</td>
<td>14 (1.7)</td>
<td>59 (2.2)</td>
<td>24 (1.8)</td>
<td>3 (0.7)</td>
<td></td>
</tr>
<tr>
<td>Learn to explain ideas in mathematics effectively</td>
<td>2 (0.6)</td>
<td>11 (1.9)</td>
<td>45 (2.6)</td>
<td>42 (2.5)</td>
<td></td>
</tr>
<tr>
<td>Learn how to apply mathematics in business and industry</td>
<td>6 (1.1)</td>
<td>34 (2.4)</td>
<td>42 (2.7)</td>
<td>18 (1.9)</td>
<td></td>
</tr>
<tr>
<td>Learn to perform computations with speed and accuracy</td>
<td>3 (1.2)</td>
<td>18 (2.0)</td>
<td>44 (2.9)</td>
<td>35 (2.6)</td>
<td></td>
</tr>
<tr>
<td>Prepare for standardized tests</td>
<td>3 (0.8)</td>
<td>19 (2.3)</td>
<td>41 (2.5)</td>
<td>38 (2.6)</td>
<td></td>
</tr>
</tbody>
</table>
### Table MTQ 23.3
**Emphasis Given in Grade 9–12 Mathematics Classes to Various Instructional Objectives**

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>None</th>
<th>Minimal Emphasis</th>
<th>Moderate Emphasis</th>
<th>Heavy Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase students’ interest in mathematics</td>
<td>0 (0.2)</td>
<td>11 (1.0)</td>
<td>60 (2.0)</td>
<td>29 (1.8)</td>
</tr>
<tr>
<td>Learn mathematical concepts</td>
<td>0 (0.0)</td>
<td>1 (0.6)</td>
<td>14 (1.3)</td>
<td>85 (1.4)</td>
</tr>
<tr>
<td>Learn mathematical algorithms/procedures</td>
<td>1 (0.5)</td>
<td>8 (1.2)</td>
<td>34 (1.9)</td>
<td>57 (1.9)</td>
</tr>
<tr>
<td>Develop students’ computational skills</td>
<td>2 (0.5)</td>
<td>22 (1.8)</td>
<td>39 (1.7)</td>
<td>37 (1.9)</td>
</tr>
<tr>
<td>Learn how to solve problems</td>
<td>0 (0.0)</td>
<td>1 (0.4)</td>
<td>25 (1.7)</td>
<td>74 (1.7)</td>
</tr>
<tr>
<td>Learn to reason mathematically</td>
<td>0 (0.0)</td>
<td>2 (0.4)</td>
<td>26 (1.8)</td>
<td>72 (1.8)</td>
</tr>
<tr>
<td>Learn how mathematics ideas connect with one another</td>
<td>1 (0.6)</td>
<td>5 (0.9)</td>
<td>39 (1.7)</td>
<td>55 (1.8)</td>
</tr>
<tr>
<td>Prepare for further study in mathematics</td>
<td>1 (0.4)</td>
<td>9 (1.1)</td>
<td>28 (1.7)</td>
<td>61 (1.9)</td>
</tr>
<tr>
<td>Understand the logical structure of mathematics</td>
<td>2 (0.5)</td>
<td>16 (1.3)</td>
<td>45 (1.6)</td>
<td>38 (1.6)</td>
</tr>
<tr>
<td>Learn about the history and nature of mathematics</td>
<td>15 (1.9)</td>
<td>61 (1.9)</td>
<td>21 (1.5)</td>
<td>3 (0.5)</td>
</tr>
<tr>
<td>Learn to explain ideas in mathematics effectively</td>
<td>1 (0.4)</td>
<td>15 (1.6)</td>
<td>52 (2.2)</td>
<td>32 (2.0)</td>
</tr>
<tr>
<td>Learn how to apply mathematics in business and industry</td>
<td>5 (0.9)</td>
<td>34 (1.8)</td>
<td>44 (1.8)</td>
<td>16 (1.4)</td>
</tr>
<tr>
<td>Learn to perform computations with speed and accuracy</td>
<td>8 (1.5)</td>
<td>30 (1.6)</td>
<td>42 (2.0)</td>
<td>20 (1.6)</td>
</tr>
<tr>
<td>Prepare for standardized tests</td>
<td>5 (1.2)</td>
<td>24 (1.6)</td>
<td>43 (2.1)</td>
<td>28 (1.9)</td>
</tr>
</tbody>
</table>

---

### Table MTQ 24.1
**Grade K–4 Mathematics Teachers Report Using Various Strategies in Their Classrooms**

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Nevertimes a year</th>
<th>Once ortwice a month</th>
<th>Once ortwice a week</th>
<th>All oralmost all lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce content through formal presentations</td>
<td>1 (0.2)</td>
<td>2 (0.7)</td>
<td>15 (1.7)</td>
<td>45 (2.5)</td>
</tr>
<tr>
<td>Pose open-ended questions</td>
<td>0 (0.2)</td>
<td>2 (0.7)</td>
<td>20 (1.9)</td>
<td>45 (2.3)</td>
</tr>
<tr>
<td>Engage the whole class in discussions</td>
<td>0 —*</td>
<td>0 (0.2)</td>
<td>6 (1.1)</td>
<td>34 (2.2)</td>
</tr>
<tr>
<td>Require students to explain their reasoning when giving an answer</td>
<td>0 —*</td>
<td>1 (0.5)</td>
<td>10 (1.7)</td>
<td>37 (2.4)</td>
</tr>
<tr>
<td>Ask students to explain concepts to one another</td>
<td>1 (0.3)</td>
<td>8 (1.2)</td>
<td>26 (2.2)</td>
<td>46 (2.4)</td>
</tr>
<tr>
<td>Ask students to consider alternative explanations</td>
<td>0 (0.3)</td>
<td>7 (1.2)</td>
<td>25 (2.3)</td>
<td>45 (3.1)</td>
</tr>
<tr>
<td>Ask students to use multiple representations</td>
<td>5 (0.9)</td>
<td>14 (1.6)</td>
<td>30 (2.3)</td>
<td>37 (2.1)</td>
</tr>
<tr>
<td>Allow students to work at their own pace</td>
<td>1 (0.1)</td>
<td>3 (1.1)</td>
<td>14 (1.6)</td>
<td>33 (2.2)</td>
</tr>
<tr>
<td>Help students see connections between mathematics and other disciplines</td>
<td>1 (0.4)</td>
<td>7 (1.2)</td>
<td>28 (2.0)</td>
<td>41 (2.6)</td>
</tr>
<tr>
<td>Assign mathematics homework</td>
<td>3 (0.9)</td>
<td>7 (1.3)</td>
<td>12 (1.6)</td>
<td>35 (2.0)</td>
</tr>
<tr>
<td>Read and comment on the reflections students have written</td>
<td>22 (2.3)</td>
<td>22 (2.1)</td>
<td>26 (2.2)</td>
<td>22 (2.2)</td>
</tr>
</tbody>
</table>

* No teachers in the sample selected this response option. Thus, it is not possible to calculate the standard error of this estimate.
### Table MTQ 24.2
**Grade 5–8 Mathematics Teachers Report**
**Using Various Strategies in Their Classrooms**

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Never</th>
<th>A few times a year</th>
<th>Once or twice a month</th>
<th>Once or twice a week</th>
<th>All or almost all lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce content through formal presentations</td>
<td>1 (0.4)</td>
<td>4 (1.2)</td>
<td>11 (1.9)</td>
<td>41 (2.4)</td>
<td>43 (2.4)</td>
</tr>
<tr>
<td>Pose open-ended questions</td>
<td>0 (0.2)</td>
<td>3 (0.5)</td>
<td>20 (2.0)</td>
<td>45 (2.4)</td>
<td>32 (2.2)</td>
</tr>
<tr>
<td>Engage the whole class in discussions</td>
<td>0 —*</td>
<td>2 (0.6)</td>
<td>13 (1.8)</td>
<td>40 (2.3)</td>
<td>45 (2.5)</td>
</tr>
<tr>
<td>Require students to explain their reasoning when giving an answer</td>
<td>0 —*</td>
<td>0 (0.2)</td>
<td>8 (1.3)</td>
<td>36 (2.5)</td>
<td>56 (2.8)</td>
</tr>
<tr>
<td>Ask students to explain concepts to one another</td>
<td>0 —*</td>
<td>8 (1.6)</td>
<td>20 (1.9)</td>
<td>48 (2.9)</td>
<td>24 (1.9)</td>
</tr>
<tr>
<td>Ask students to consider alternative explanations</td>
<td>0 (0.2)</td>
<td>4 (0.9)</td>
<td>20 (2.1)</td>
<td>48 (2.4)</td>
<td>28 (2.0)</td>
</tr>
<tr>
<td>Ask students to use multiple representations</td>
<td>1 (0.5)</td>
<td>12 (1.6)</td>
<td>41 (2.3)</td>
<td>35 (2.4)</td>
<td>10 (1.1)</td>
</tr>
<tr>
<td>Allow students to work at their own pace</td>
<td>2 (0.9)</td>
<td>11 (1.3)</td>
<td>22 (2.4)</td>
<td>36 (2.2)</td>
<td>30 (3.0)</td>
</tr>
<tr>
<td>Help students see connections between mathematics and other disciplines</td>
<td>0 (0.1)</td>
<td>6 (1.0)</td>
<td>32 (2.2)</td>
<td>45 (2.6)</td>
<td>17 (2.0)</td>
</tr>
<tr>
<td>Assign mathematics homework</td>
<td>0 (0.1)</td>
<td>0 (0.2)</td>
<td>2 (0.5)</td>
<td>23 (2.2)</td>
<td>75 (2.4)</td>
</tr>
<tr>
<td>Read and comment on the reflections students have written</td>
<td>27 (2.3)</td>
<td>26 (2.3)</td>
<td>26 (1.8)</td>
<td>14 (1.7)</td>
<td>6 (1.5)</td>
</tr>
</tbody>
</table>

* No teachers in the sample selected this response option. Thus, it is not possible to calculate the standard error of this estimate.

### Table MTQ 24.3
**Grade 9–12 Mathematics Teachers Report**
**Using Various Strategies in Their Classrooms**

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Never</th>
<th>A few times a year</th>
<th>Once or twice a month</th>
<th>Once or twice a week</th>
<th>All or almost all lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce content through formal presentations</td>
<td>0 (0.3)</td>
<td>3 (0.8)</td>
<td>7 (0.9)</td>
<td>40 (1.9)</td>
<td>49 (1.9)</td>
</tr>
<tr>
<td>Pose open-ended questions</td>
<td>0 (0.2)</td>
<td>7 (2.0)</td>
<td>23 (1.6)</td>
<td>41 (2.0)</td>
<td>29 (1.7)</td>
</tr>
<tr>
<td>Engage the whole class in discussions</td>
<td>0 (0.2)</td>
<td>6 (1.4)</td>
<td>21 (1.6)</td>
<td>38 (1.7)</td>
<td>35 (1.9)</td>
</tr>
<tr>
<td>Require students to explain their reasoning when giving an answer</td>
<td>0 (0.1)</td>
<td>2 (0.7)</td>
<td>12 (1.6)</td>
<td>40 (1.7)</td>
<td>46 (2.3)</td>
</tr>
<tr>
<td>Ask students to explain concepts to one another</td>
<td>0 (0.2)</td>
<td>6 (0.8)</td>
<td>24 (1.5)</td>
<td>50 (1.7)</td>
<td>20 (1.4)</td>
</tr>
<tr>
<td>Ask students to consider alternative explanations</td>
<td>0 (0.1)</td>
<td>4 (0.7)</td>
<td>28 (2.1)</td>
<td>50 (2.2)</td>
<td>17 (1.4)</td>
</tr>
<tr>
<td>Ask students to use multiple representations</td>
<td>1 (0.4)</td>
<td>14 (1.2)</td>
<td>35 (2.0)</td>
<td>37 (1.9)</td>
<td>13 (1.0)</td>
</tr>
<tr>
<td>Allow students to work at their own pace</td>
<td>6 (1.3)</td>
<td>18 (1.4)</td>
<td>28 (1.8)</td>
<td>33 (1.7)</td>
<td>16 (1.1)</td>
</tr>
<tr>
<td>Help students see connections between mathematics and other disciplines</td>
<td>1 (0.3)</td>
<td>12 (1.7)</td>
<td>40 (1.8)</td>
<td>36 (1.7)</td>
<td>12 (1.1)</td>
</tr>
<tr>
<td>Assign mathematics homework</td>
<td>0 (0.1)</td>
<td>1 (0.4)</td>
<td>2 (0.4)</td>
<td>16 (1.9)</td>
<td>80 (1.9)</td>
</tr>
<tr>
<td>Read and comment on the reflections students have written</td>
<td>44 (1.9)</td>
<td>31 (1.8)</td>
<td>16 (1.8)</td>
<td>7 (0.9)</td>
<td>2 (0.3)</td>
</tr>
</tbody>
</table>

Horizon Research, Inc.

The 2000 National Survey of Chapel Hill, NC Science and Mathematics
<table>
<thead>
<tr>
<th>Activity</th>
<th>Percent of Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen and take notes during presentation by teacher</td>
<td>Never 17 (1.9) A few times a year 14 (1.9) Once or twice a month 10 (1.6) All or almost all lessons 10 (1.5)</td>
</tr>
<tr>
<td>Work in groups</td>
<td>0 (0.2) 2 (0.6) 27 (2.3) 54 (2.5) 17 (1.6)</td>
</tr>
<tr>
<td>Read from a mathematics textbook in class</td>
<td>33 (2.3) 11 (1.6) 16 (1.7) 24 (2.0) 16 (1.9)</td>
</tr>
<tr>
<td>Read other mathematics-related materials in class</td>
<td>15 (1.8) 20 (2.0) 39 (2.3) 22 (1.9) 5 (1.1)</td>
</tr>
<tr>
<td>Engage in mathematical activities using concrete materials</td>
<td>0 (0.2) 1 (0.3) 14 (1.9) 43 (2.5) 42 (2.4)</td>
</tr>
<tr>
<td>Practice routine computations/algorithms</td>
<td>6 (1.2) 5 (1.1) 12 (1.6) 41 (2.1) 36 (2.3)</td>
</tr>
<tr>
<td>Review homework/worksheet assignments</td>
<td>8 (1.1) 7 (1.2) 15 (1.8) 35 (2.7) 36 (2.3)</td>
</tr>
<tr>
<td>Follow specific instructions in an activity or investigation</td>
<td>0 (0.3) 5 (0.8) 22 (1.9) 43 (2.3) 30 (2.3)</td>
</tr>
<tr>
<td>Design their own activity or investigation</td>
<td>16 (2.0) 33 (2.0) 36 (2.2) 13 (1.7) 2 (0.6)</td>
</tr>
<tr>
<td>Use mathematical concepts to interpret and solve applied problems</td>
<td>4 (0.9) 8 (1.2) 26 (2.0) 46 (2.2) 17 (1.7)</td>
</tr>
<tr>
<td>Answer textbook or worksheet questions</td>
<td>5 (1.0) 4 (0.8) 10 (1.6) 34 (2.3) 47 (2.6)</td>
</tr>
<tr>
<td>Record, represent, and/or analyze data</td>
<td>4 (1.1) 11 (2.0) 39 (2.3) 36 (2.4) 10 (1.4)</td>
</tr>
<tr>
<td>Write reflections</td>
<td>30 (2.4) 23 (2.0) 25 (2.0) 16 (1.6) 5 (1.0)</td>
</tr>
<tr>
<td>Make formal presentations to the rest of the class</td>
<td>34 (2.2) 36 (2.3) 21 (2.2) 8 (1.1) 1 (0.6)</td>
</tr>
<tr>
<td>Work on extended mathematics investigations or projects</td>
<td>46 (2.7) 34 (2.8) 14 (1.7) 4 (0.7) 2 (0.7)</td>
</tr>
<tr>
<td>Use calculators or computers for learning or practicing skills</td>
<td>14 (1.9) 21 (1.9) 38 (2.3) 24 (2.1) 3 (0.8)</td>
</tr>
<tr>
<td>Use calculators or computers to develop conceptual understanding</td>
<td>17 (2.3) 24 (2.0) 37 (2.6) 20 (2.1) 2 (0.6)</td>
</tr>
<tr>
<td>Use calculators or computers as a tool</td>
<td>49 (2.8) 24 (2.0) 18 (1.8) 8 (1.3) 1 (0.4)</td>
</tr>
</tbody>
</table>
### Table MTQ 25.2
Grade 5–8 Mathematics Teachers Report
Various Activities in Their Classrooms

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percent of Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
</tr>
<tr>
<td>Listen and take notes during presentation by teacher</td>
<td>4 (1.3)</td>
</tr>
<tr>
<td>Work in groups</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Read from a mathematics textbook in class</td>
<td>7 (1.4)</td>
</tr>
<tr>
<td>Read other mathematics-related materials in class</td>
<td>14 (1.7)</td>
</tr>
<tr>
<td>Engage in mathematical activities using concrete materials</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Practice routine computations/algorithms</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Review homework/worksheet assignments</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Follow specific instructions in an activity or investigation</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Design their own activity or investigation</td>
<td>11 (1.4)</td>
</tr>
<tr>
<td>Use mathematical concepts to interpret and solve applied problems</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>Answer textbook or worksheet questions</td>
<td>0 (0.3)</td>
</tr>
<tr>
<td>Record, represent, and/or analyze data</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Write reflections</td>
<td>32 (2.3)</td>
</tr>
<tr>
<td>Make formal presentations to the rest of the class</td>
<td>19 (1.9)</td>
</tr>
<tr>
<td>Work on extended mathematics investigations or projects</td>
<td>24 (2.5)</td>
</tr>
<tr>
<td>Use calculators or computers for learning or practicing skills</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td>Use calculators or computers to develop conceptual understanding</td>
<td>6 (1.3)</td>
</tr>
<tr>
<td>Use calculators or computers as a tool</td>
<td>21 (2.1)</td>
</tr>
</tbody>
</table>
Table MTQ 25.3
Grade 9–12 Mathematics Teachers Report
Various Activities in Their Classrooms

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percent of Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
</tr>
<tr>
<td>Listen and take notes during presentation by teacher</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Work in groups</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Read from a mathematics textbook in class</td>
<td>11 (1.2)</td>
</tr>
<tr>
<td>Read other mathematics-related materials in class</td>
<td>28 (1.7)</td>
</tr>
<tr>
<td>Engage in mathematical activities using concrete materials</td>
<td>4 (0.7)</td>
</tr>
<tr>
<td>Practice routine computations/algorithms</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Review homework/worksheet assignments</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Follow specific instructions in an activity or investigation</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Design their own activity or investigation</td>
<td>25 (1.9)</td>
</tr>
<tr>
<td>Use mathematical concepts to interpret and solve applied problems</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Answer textbook or worksheet questions</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Record, represent, and/or analyze data</td>
<td>4 (0.6)</td>
</tr>
<tr>
<td>Write reflections</td>
<td>55 (2.1)</td>
</tr>
<tr>
<td>Make formal presentations to the rest of the class</td>
<td>30 (1.9)</td>
</tr>
<tr>
<td>Work on extended mathematics investigations or projects</td>
<td>37 (2.2)</td>
</tr>
<tr>
<td>Use calculators or computers for learning or practicing skills</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>Use calculators or computers to develop conceptual understanding</td>
<td>4 (0.6)</td>
</tr>
<tr>
<td>Use calculators or computers as a tool</td>
<td>19 (1.6)</td>
</tr>
</tbody>
</table>
### Table MTQ 26.1
Grade K–4 Mathematics Teachers Report
Use of Computers in Their Classrooms

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never (M)</th>
<th>A few times a year (M)</th>
<th>Once or twice a month (M)</th>
<th>Once or twice a week (M)</th>
<th>All or almost all lessons (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do drill and practice</td>
<td>20 (2.2)</td>
<td>19 (2.2)</td>
<td>29 (2.3)</td>
<td>28 (2.3)</td>
<td>4 (0.9)</td>
</tr>
<tr>
<td>Demonstrate mathematics principles</td>
<td>32 (2.2)</td>
<td>26 (2.3)</td>
<td>24 (2.1)</td>
<td>13 (1.6)</td>
<td>4 (0.8)</td>
</tr>
<tr>
<td>Play mathematics learning games</td>
<td>12 (1.7)</td>
<td>12 (1.6)</td>
<td>29 (2.2)</td>
<td>39 (2.1)</td>
<td>7 (1.1)</td>
</tr>
<tr>
<td>Do simulations</td>
<td>51 (2.3)</td>
<td>24 (2.2)</td>
<td>15 (1.6)</td>
<td>9 (1.2)</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>Collect data using sensors or probes</td>
<td>75 (2.1)</td>
<td>16 (1.9)</td>
<td>6 (1.0)</td>
<td>2 (0.5)</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Retrieve or exchange data</td>
<td>66 (2.5)</td>
<td>20 (2.2)</td>
<td>9 (1.4)</td>
<td>4 (1.0)</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>Solve problems using simulations</td>
<td>56 (2.3)</td>
<td>21 (2.1)</td>
<td>14 (1.6)</td>
<td>8 (1.2)</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>Take a test or quiz</td>
<td>60 (2.3)</td>
<td>16 (1.8)</td>
<td>13 (1.4)</td>
<td>10 (1.7)</td>
<td>1 (0.4)</td>
</tr>
</tbody>
</table>

### Table MTQ 26.2
Grade 5–8 Mathematics Teachers Report
Use of Computers in Their Classrooms

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never (M)</th>
<th>A few times a year (M)</th>
<th>Once or twice a month (M)</th>
<th>Once or twice a week (M)</th>
<th>All or almost all lessons (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do drill and practice</td>
<td>15 (1.9)</td>
<td>22 (2.2)</td>
<td>25 (2.4)</td>
<td>27 (3.0)</td>
<td>11 (1.4)</td>
</tr>
<tr>
<td>Demonstrate mathematics principles</td>
<td>13 (2.0)</td>
<td>18 (1.8)</td>
<td>32 (2.0)</td>
<td>29 (2.4)</td>
<td>8 (1.1)</td>
</tr>
<tr>
<td>Play mathematics learning games</td>
<td>18 (2.2)</td>
<td>24 (2.1)</td>
<td>39 (2.4)</td>
<td>17 (1.9)</td>
<td>3 (0.7)</td>
</tr>
<tr>
<td>Do simulations</td>
<td>32 (2.4)</td>
<td>29 (2.0)</td>
<td>30 (2.1)</td>
<td>7 (1.5)</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>Collect data using sensors or probes</td>
<td>60 (2.7)</td>
<td>24 (1.9)</td>
<td>14 (2.2)</td>
<td>2 (0.6)</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Retrieve or exchange data</td>
<td>38 (2.2)</td>
<td>33 (2.4)</td>
<td>21 (2.0)</td>
<td>7 (1.4)</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td>Solve problems using simulations</td>
<td>34 (2.3)</td>
<td>27 (2.3)</td>
<td>25 (1.9)</td>
<td>11 (1.4)</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>Take a test or quiz</td>
<td>21 (2.0)</td>
<td>19 (2.4)</td>
<td>29 (2.0)</td>
<td>25 (2.7)</td>
<td>7 (1.1)</td>
</tr>
</tbody>
</table>

### Table MTQ 26.3
Grade 9–12 Mathematics Teachers Report
Use of Computers in Their Classrooms

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never (M)</th>
<th>A few times a year (M)</th>
<th>Once or twice a month (M)</th>
<th>Once or twice a week (M)</th>
<th>All or almost all lessons (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do drill and practice</td>
<td>11 (1.2)</td>
<td>12 (1.3)</td>
<td>15 (1.9)</td>
<td>26 (1.6)</td>
<td>36 (1.8)</td>
</tr>
<tr>
<td>Demonstrate mathematics principles</td>
<td>6 (0.8)</td>
<td>13 (1.3)</td>
<td>30 (1.6)</td>
<td>32 (1.9)</td>
<td>19 (1.5)</td>
</tr>
<tr>
<td>Play mathematics learning games</td>
<td>44 (1.8)</td>
<td>34 (2.0)</td>
<td>16 (1.6)</td>
<td>3 (0.6)</td>
<td>3 (0.7)</td>
</tr>
<tr>
<td>Do simulations</td>
<td>37 (2.1)</td>
<td>33 (1.8)</td>
<td>19 (1.4)</td>
<td>7 (1.0)</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Collect data using sensors or probes</td>
<td>67 (1.8)</td>
<td>23 (1.8)</td>
<td>6 (0.9)</td>
<td>2 (0.4)</td>
<td>2 (0.4)</td>
</tr>
<tr>
<td>Retrieve or exchange data</td>
<td>50 (2.1)</td>
<td>28 (2.0)</td>
<td>14 (1.6)</td>
<td>6 (0.9)</td>
<td>3 (0.7)</td>
</tr>
<tr>
<td>Solve problems using simulations</td>
<td>42 (2.3)</td>
<td>28 (1.9)</td>
<td>16 (1.4)</td>
<td>9 (1.0)</td>
<td>5 (1.0)</td>
</tr>
<tr>
<td>Take a test or quiz</td>
<td>7 (1.4)</td>
<td>5 (0.9)</td>
<td>20 (1.7)</td>
<td>41 (2.0)</td>
<td>27 (1.6)</td>
</tr>
</tbody>
</table>
### Table MTQ 27.1

**Grade K–4 Mathematics Teachers Report**

**Assessing Student Progress Using Various Methods**

<table>
<thead>
<tr>
<th>Method</th>
<th>Percent of Classes</th>
<th>Never</th>
<th>A few times a year</th>
<th>Once or twice a month</th>
<th>Once or twice a week</th>
<th>All or almost all lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct a pre-assessment to determine what students already know</td>
<td></td>
<td>5 (1.4)</td>
<td>26 (1.9)</td>
<td>40 (2.5)</td>
<td>20 (1.9)</td>
<td>8 (1.2)</td>
</tr>
<tr>
<td>Observe students and ask questions as they work individually</td>
<td></td>
<td>0 (0.3)</td>
<td>1 (0.5)</td>
<td>9 (1.5)</td>
<td>43 (2.7)</td>
<td>46 (3.0)</td>
</tr>
<tr>
<td>Observe students and ask questions as they work in small groups</td>
<td></td>
<td>1 (0.6)</td>
<td>3 (0.7)</td>
<td>19 (1.7)</td>
<td>41 (2.6)</td>
<td>36 (2.8)</td>
</tr>
<tr>
<td>Ask students questions during large group discussions</td>
<td></td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>3 (0.8)</td>
<td>30 (2.8)</td>
<td>67 (2.9)</td>
</tr>
<tr>
<td>Use assessments embedded in class activities to see if students are “getting it”</td>
<td></td>
<td>1 (0.4)</td>
<td>1 (0.6)</td>
<td>12 (2.0)</td>
<td>45 (2.6)</td>
<td>41 (2.6)</td>
</tr>
<tr>
<td>Review student homework</td>
<td></td>
<td>8 (1.2)</td>
<td>6 (1.1)</td>
<td>8 (1.4)</td>
<td>30 (2.4)</td>
<td>49 (2.5)</td>
</tr>
<tr>
<td>Review student notebooks/journals</td>
<td></td>
<td>35 (2.7)</td>
<td>12 (1.6)</td>
<td>22 (2.3)</td>
<td>23 (2.0)</td>
<td>8 (1.2)</td>
</tr>
<tr>
<td>Review student portfolios</td>
<td></td>
<td>33 (2.4)</td>
<td>22 (2.0)</td>
<td>29 (2.7)</td>
<td>13 (1.6)</td>
<td>4 (0.9)</td>
</tr>
<tr>
<td>Have students do long-term mathematics projects</td>
<td></td>
<td>58 (2.9)</td>
<td>27 (2.6)</td>
<td>10 (1.5)</td>
<td>4 (1.0)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Have students present their work to the class</td>
<td></td>
<td>26 (2.3)</td>
<td>26 (2.3)</td>
<td>30 (2.7)</td>
<td>15 (1.8)</td>
<td>3 (0.9)</td>
</tr>
<tr>
<td>Give predominantly short-answer tests</td>
<td></td>
<td>22 (2.0)</td>
<td>17 (2.1)</td>
<td>34 (2.4)</td>
<td>19 (1.9)</td>
<td>9 (1.2)</td>
</tr>
<tr>
<td>Give tests requiring open-ended responses</td>
<td></td>
<td>23 (2.2)</td>
<td>28 (2.5)</td>
<td>34 (2.5)</td>
<td>12 (1.4)</td>
<td>4 (0.9)</td>
</tr>
<tr>
<td>Grade student work on open-ended and/or laboratory tasks using defined criteria</td>
<td></td>
<td>41 (2.4)</td>
<td>24 (2.3)</td>
<td>25 (2.1)</td>
<td>8 (1.2)</td>
<td>2 (0.7)</td>
</tr>
<tr>
<td>Have students assess each other</td>
<td></td>
<td>43 (2.4)</td>
<td>28 (2.2)</td>
<td>21 (2.2)</td>
<td>7 (1.1)</td>
<td>1 (0.4)</td>
</tr>
</tbody>
</table>
# Table MTQ 27.2

## Grade 5–8 Mathematics Teachers Report

### Assessing Student Progress Using Various Methods

<table>
<thead>
<tr>
<th>Percentage of Teachers</th>
<th>Never</th>
<th>A few times a year</th>
<th>Once or twice a month</th>
<th>Once or twice a week</th>
<th>All or almost all lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct a pre-assessment to determine what students already know</td>
<td>6 (1.2)</td>
<td>35 (2.1)</td>
<td>35 (2.3)</td>
<td>16 (2.1)</td>
<td>8 (2.0)</td>
</tr>
<tr>
<td>Observe students and ask questions as they work individually</td>
<td>0 (0.0)</td>
<td>1 (0.3)</td>
<td>9 (1.3)</td>
<td>41 (2.2)</td>
<td>49 (2.3)</td>
</tr>
<tr>
<td>Observe students and ask questions as they work in small groups</td>
<td>1 (0.9)</td>
<td>7 (1.4)</td>
<td>23 (2.1)</td>
<td>43 (2.1)</td>
<td>26 (2.4)</td>
</tr>
<tr>
<td>Ask students questions during large group discussions</td>
<td>0 (0.1)</td>
<td>0 (0.2)</td>
<td>7 (1.3)</td>
<td>27 (2.4)</td>
<td>66 (2.6)</td>
</tr>
<tr>
<td>Use assessments embedded in class activities to see if students are “getting it”</td>
<td>0 (0.1)</td>
<td>2 (0.4)</td>
<td>15 (1.9)</td>
<td>44 (3.1)</td>
<td>39 (3.4)</td>
</tr>
<tr>
<td>Review student homework</td>
<td>0 (0.1)</td>
<td>0 (0.3)</td>
<td>3 (0.7)</td>
<td>25 (2.0)</td>
<td>71 (2.2)</td>
</tr>
<tr>
<td>Review student notebooks/journals</td>
<td>23 (2.4)</td>
<td>18 (2.2)</td>
<td>31 (2.1)</td>
<td>19 (1.8)</td>
<td>9 (1.6)</td>
</tr>
<tr>
<td>Review student portfolios</td>
<td>46 (2.4)</td>
<td>23 (2.5)</td>
<td>20 (1.8)</td>
<td>8 (1.3)</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td>Have students do long-term mathematics projects</td>
<td>29 (2.6)</td>
<td>45 (2.5)</td>
<td>21 (2.0)</td>
<td>4 (0.8)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Have students present their work to the class</td>
<td>13 (1.9)</td>
<td>31 (2.3)</td>
<td>35 (2.0)</td>
<td>15 (1.9)</td>
<td>6 (1.4)</td>
</tr>
<tr>
<td>Give predominantly short-answer tests</td>
<td>17 (2.2)</td>
<td>21 (1.9)</td>
<td>31 (2.6)</td>
<td>22 (2.6)</td>
<td>9 (1.2)</td>
</tr>
<tr>
<td>Give tests requiring open-ended responses</td>
<td>6 (1.2)</td>
<td>23 (2.1)</td>
<td>41 (2.9)</td>
<td>25 (2.4)</td>
<td>6 (1.2)</td>
</tr>
<tr>
<td>Grade student work on open-ended and/or laboratory tasks using defined criteria</td>
<td>21 (2.7)</td>
<td>29 (2.4)</td>
<td>34 (2.4)</td>
<td>13 (1.9)</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td>Have students assess each other</td>
<td>30 (2.9)</td>
<td>33 (2.5)</td>
<td>25 (1.9)</td>
<td>11 (1.5)</td>
<td>2 (0.7)</td>
</tr>
</tbody>
</table>
### Table MTQ 27.3

**Grade 9–12 Mathematics Teachers Report**

**Assessing Student Progress Using Various Methods**

<table>
<thead>
<tr>
<th>Method</th>
<th>Never (N=436)</th>
<th>A few times a year (N=291)</th>
<th>Once or twice a month (N=121)</th>
<th>Once or twice a week (N=42)</th>
<th>All or almost all lessons (N=1,742)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct a pre-assessment to determine what students already know</td>
<td>12 (1.5)</td>
<td>43 (2.0)</td>
<td>29 (1.9)</td>
<td>12 (1.5)</td>
<td>4 (0.7)</td>
</tr>
<tr>
<td>Observe students and ask questions as they work individually</td>
<td>0 (0.2)</td>
<td>3 (1.3)</td>
<td>11 (1.3)</td>
<td>43 (1.9)</td>
<td>42 (1.9)</td>
</tr>
<tr>
<td>Observe students and ask questions as they work in small groups</td>
<td>1 (0.4)</td>
<td>9 (1.6)</td>
<td>23 (1.7)</td>
<td>42 (1.9)</td>
<td>24 (1.7)</td>
</tr>
<tr>
<td>Ask students questions during large group discussions</td>
<td>1 (0.2)</td>
<td>2 (0.7)</td>
<td>8 (1.2)</td>
<td>32 (1.7)</td>
<td>58 (1.9)</td>
</tr>
<tr>
<td>Use assessments embedded in class activities to see if students are “getting it”</td>
<td>1 (0.3)</td>
<td>5 (0.8)</td>
<td>19 (1.4)</td>
<td>42 (2.0)</td>
<td>32 (1.7)</td>
</tr>
<tr>
<td>Review student homework</td>
<td>1 (0.6)</td>
<td>1 (0.4)</td>
<td>7 (1.4)</td>
<td>27 (1.6)</td>
<td>63 (1.9)</td>
</tr>
<tr>
<td>Review student notebooks/journals</td>
<td>32 (2.1)</td>
<td>25 (1.6)</td>
<td>27 (1.8)</td>
<td>12 (1.2)</td>
<td>5 (0.7)</td>
</tr>
<tr>
<td>Review student portfolios</td>
<td>65 (2.2)</td>
<td>18 (1.5)</td>
<td>13 (1.5)</td>
<td>3 (0.5)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Have students do long-term mathematics projects</td>
<td>39 (1.8)</td>
<td>44 (1.9)</td>
<td>13 (1.4)</td>
<td>3 (0.7)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Have students present their work to the class</td>
<td>16 (1.5)</td>
<td>31 (2.1)</td>
<td>30 (2.6)</td>
<td>18 (1.4)</td>
<td>6 (0.9)</td>
</tr>
<tr>
<td>Give predominantly short-answer tests</td>
<td>21 (1.7)</td>
<td>32 (1.8)</td>
<td>24 (1.9)</td>
<td>16 (1.5)</td>
<td>6 (0.9)</td>
</tr>
<tr>
<td>Give tests requiring open-ended responses</td>
<td>6 (0.9)</td>
<td>19 (1.7)</td>
<td>40 (1.9)</td>
<td>25 (1.8)</td>
<td>10 (0.9)</td>
</tr>
<tr>
<td>Grade student work on open-ended and/or laboratory tasks using defined criteria</td>
<td>25 (1.9)</td>
<td>29 (1.6)</td>
<td>30 (1.9)</td>
<td>13 (1.5)</td>
<td>4 (0.8)</td>
</tr>
<tr>
<td>Have students assess each other</td>
<td>42 (2.0)</td>
<td>34 (2.1)</td>
<td>18 (1.8)</td>
<td>5 (0.9)</td>
<td>1 (0.3)</td>
</tr>
</tbody>
</table>
### Table MTQ 28a.1
**Availability of Various Equipment in Grade K–4 Mathematics Classrooms**

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Not at all Available</th>
<th>Readily Available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Overhead projector</td>
<td>3 (1.1)</td>
<td>7 (1.4)</td>
</tr>
<tr>
<td>Videotape player</td>
<td>6 (1.3)</td>
<td>15 (1.9)</td>
</tr>
<tr>
<td>Videodisc player</td>
<td>63 (3.0)</td>
<td>16 (2.1)</td>
</tr>
<tr>
<td>CD-ROM player</td>
<td>24 (2.4)</td>
<td>18 (2.2)</td>
</tr>
<tr>
<td>Four-function calculators</td>
<td>32 (2.6)</td>
<td>15 (1.8)</td>
</tr>
<tr>
<td>Fraction calculators</td>
<td>88 (1.9)</td>
<td>9 (1.5)</td>
</tr>
<tr>
<td>Graphing calculators</td>
<td>93 (1.3)</td>
<td>5 (1.1)</td>
</tr>
<tr>
<td>Scientific calculators</td>
<td>92 (1.3)</td>
<td>5 (1.1)</td>
</tr>
<tr>
<td>Computers</td>
<td>4 (1.1)</td>
<td>22 (2.5)</td>
</tr>
<tr>
<td>Calculator/computer lab interfacing devices</td>
<td>64 (2.4)</td>
<td>19 (2.0)</td>
</tr>
<tr>
<td>Computers with Internet connection</td>
<td>20 (2.6)</td>
<td>24 (2.6)</td>
</tr>
</tbody>
</table>

### Table MTQ 28a.2
**Availability of Various Equipment in Grade 5–8 Mathematics Classrooms**

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Not at all Available</th>
<th>Readily Available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Overhead projector</td>
<td>1 (0.3)</td>
<td>5 (1.1)</td>
</tr>
<tr>
<td>Videotape player</td>
<td>4 (0.9)</td>
<td>20 (2.1)</td>
</tr>
<tr>
<td>Videodisc player</td>
<td>51 (2.8)</td>
<td>24 (1.9)</td>
</tr>
<tr>
<td>CD-ROM player</td>
<td>24 (2.9)</td>
<td>19 (2.2)</td>
</tr>
<tr>
<td>Four-function calculators</td>
<td>11 (1.4)</td>
<td>11 (1.3)</td>
</tr>
<tr>
<td>Fraction calculators</td>
<td>41 (2.6)</td>
<td>15 (1.5)</td>
</tr>
<tr>
<td>Graphing calculators</td>
<td>63 (2.4)</td>
<td>18 (2.0)</td>
</tr>
<tr>
<td>Scientific calculators</td>
<td>50 (2.4)</td>
<td>15 (1.5)</td>
</tr>
<tr>
<td>Computers</td>
<td>7 (1.1)</td>
<td>34 (2.4)</td>
</tr>
<tr>
<td>Calculator/computer lab interfacing devices</td>
<td>53 (2.7)</td>
<td>27 (2.1)</td>
</tr>
<tr>
<td>Computers with Internet connection</td>
<td>16 (2.3)</td>
<td>31 (2.4)</td>
</tr>
</tbody>
</table>
Table MTQ 28a.3
Availability of Various Equipment in Grade 9–12 Mathematics Classrooms

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Not at all Available</th>
<th>Readily Available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Overhead projector</td>
<td>2 (0.6)</td>
<td>6 (1.1)</td>
</tr>
<tr>
<td>Videotape player</td>
<td>7 (0.9)</td>
<td>27 (2.0)</td>
</tr>
<tr>
<td>Videodisc player</td>
<td>58 (2.2)</td>
<td>25 (1.9)</td>
</tr>
<tr>
<td>CD-ROM player</td>
<td>33 (2.4)</td>
<td>25 (1.9)</td>
</tr>
<tr>
<td>Four-function calculators</td>
<td>17 (1.4)</td>
<td>15 (1.8)</td>
</tr>
<tr>
<td>Fraction calculators</td>
<td>24 (1.7)</td>
<td>19 (1.5)</td>
</tr>
<tr>
<td>Graphing calculators</td>
<td>10 (1.4)</td>
<td>21 (1.8)</td>
</tr>
<tr>
<td>Scientific calculators</td>
<td>12 (1.1)</td>
<td>19 (1.7)</td>
</tr>
<tr>
<td>Computers</td>
<td>15 (1.6)</td>
<td>46 (1.8)</td>
</tr>
<tr>
<td>Calculator/computer lab interfacing devices</td>
<td>37 (2.5)</td>
<td>35 (1.9)</td>
</tr>
<tr>
<td>Computers with Internet connection</td>
<td>20 (2.4)</td>
<td>34 (2.1)</td>
</tr>
</tbody>
</table>

Table MTQ 28b
Mathematics Classes Where Teachers Indicate They Need Various Equipment

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead projector</td>
<td>84 (2.0)</td>
<td>82 (2.3)</td>
<td>79 (1.8)</td>
</tr>
<tr>
<td>Videotape player</td>
<td>40 (3.0)</td>
<td>39 (2.4)</td>
<td>30 (2.1)</td>
</tr>
<tr>
<td>Videodisc player</td>
<td>13 (1.8)</td>
<td>15 (2.2)</td>
<td>5 (0.8)</td>
</tr>
<tr>
<td>CD-ROM player</td>
<td>50 (2.6)</td>
<td>34 (2.6)</td>
<td>21 (1.9)</td>
</tr>
<tr>
<td>Four-function calculators</td>
<td>56 (2.2)</td>
<td>74 (2.5)</td>
<td>54 (1.8)</td>
</tr>
<tr>
<td>Fraction calculators</td>
<td>9 (1.4)</td>
<td>52 (3.1)</td>
<td>49 (2.0)</td>
</tr>
<tr>
<td>Graphing calculators</td>
<td>5 (1.0)</td>
<td>30 (2.4)</td>
<td>69 (2.1)</td>
</tr>
<tr>
<td>Scientific calculators</td>
<td>6 (1.2)</td>
<td>45 (3.3)</td>
<td>67 (1.9)</td>
</tr>
<tr>
<td>Computers</td>
<td>83 (2.2)</td>
<td>73 (2.3)</td>
<td>54 (2.6)</td>
</tr>
<tr>
<td>Calculator/computer lab interfacing devices</td>
<td>26 (2.4)</td>
<td>41 (2.9)</td>
<td>37 (2.3)</td>
</tr>
<tr>
<td>Computers with Internet connection</td>
<td>53 (3.1)</td>
<td>62 (2.7)</td>
<td>39 (2.3)</td>
</tr>
</tbody>
</table>
### Table MTQ 28c.1
Use of Various Equipment in Grade K–4 Mathematics Classes

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Never use in this course</th>
<th>Use in specific parts of this course</th>
<th>Fully integrated into this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead projector</td>
<td>13 (1.9)</td>
<td>42 (2.7)</td>
<td>45 (2.5)</td>
</tr>
<tr>
<td>Videotape player</td>
<td>59 (2.8)</td>
<td>37 (2.7)</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Videodisc player</td>
<td>92 (1.4)</td>
<td>7 (1.4)</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>CD-ROM player</td>
<td>55 (2.6)</td>
<td>38 (2.5)</td>
<td>7 (1.2)</td>
</tr>
<tr>
<td>Four-function calculators</td>
<td>45 (2.5)</td>
<td>46 (2.8)</td>
<td>9 (1.5)</td>
</tr>
<tr>
<td>Fraction calculators</td>
<td>97 (0.8)</td>
<td>2 (0.7)</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td>Graphing calculators</td>
<td>99 (0.6)</td>
<td>1 (0.6)</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>Scientific calculators</td>
<td>97 (0.8)</td>
<td>2 (0.8)</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>Computers</td>
<td>18 (2.4)</td>
<td>63 (2.8)</td>
<td>19 (2.1)</td>
</tr>
<tr>
<td>Calculator/computer lab interfacing devices</td>
<td>82 (1.9)</td>
<td>15 (1.8)</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Computers with Internet connection</td>
<td>61 (2.8)</td>
<td>35 (2.7)</td>
<td>5 (0.9)</td>
</tr>
</tbody>
</table>

### Table MTQ 28c.2
Use of Various Equipment in Grade 5–8 Mathematics Classes

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Never use in this course</th>
<th>Use in specific parts of this course</th>
<th>Fully integrated into this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead projector</td>
<td>11 (2.2)</td>
<td>27 (2.8)</td>
<td>62 (3.0)</td>
</tr>
<tr>
<td>Videotape player</td>
<td>57 (2.2)</td>
<td>40 (2.4)</td>
<td>4 (1.4)</td>
</tr>
<tr>
<td>Videodisc player</td>
<td>91 (1.7)</td>
<td>7 (1.2)</td>
<td>2 (1.2)</td>
</tr>
<tr>
<td>CD-ROM player</td>
<td>65 (3.1)</td>
<td>29 (2.7)</td>
<td>5 (1.5)</td>
</tr>
<tr>
<td>Four-function calculators</td>
<td>22 (1.9)</td>
<td>42 (2.6)</td>
<td>36 (2.6)</td>
</tr>
<tr>
<td>Fraction calculators</td>
<td>51 (2.5)</td>
<td>28 (1.9)</td>
<td>22 (2.0)</td>
</tr>
<tr>
<td>Graphing calculators</td>
<td>78 (1.9)</td>
<td>16 (1.5)</td>
<td>6 (1.4)</td>
</tr>
<tr>
<td>Scientific calculators</td>
<td>58 (2.8)</td>
<td>26 (2.4)</td>
<td>17 (1.9)</td>
</tr>
<tr>
<td>Computers</td>
<td>28 (2.6)</td>
<td>59 (2.8)</td>
<td>13 (1.7)</td>
</tr>
<tr>
<td>Calculator/computer lab interfacing devices</td>
<td>75 (2.0)</td>
<td>20 (1.8)</td>
<td>5 (1.0)</td>
</tr>
<tr>
<td>Computers with Internet connection</td>
<td>52 (3.3)</td>
<td>41 (3.3)</td>
<td>7 (1.0)</td>
</tr>
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Table MTQ 28c.3
Use of Various Equipment in Grade 9–12 Mathematics Classes

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Never use in this course</th>
<th>Use in specific parts of this course</th>
<th>Fully integrated into this course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead projector</td>
<td>13 (1.5)</td>
<td>33 (2.0)</td>
<td>54 (2.2)</td>
</tr>
<tr>
<td>Videotape player</td>
<td>61 (2.1)</td>
<td>37 (2.1)</td>
<td>2 (1.0)</td>
</tr>
<tr>
<td>Videodisc player</td>
<td>97 (0.9)</td>
<td>2 (0.5)</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>CD-ROM player</td>
<td>81 (2.0)</td>
<td>18 (1.9)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Four-function calculators</td>
<td>39 (2.1)</td>
<td>21 (1.7)</td>
<td>40 (2.2)</td>
</tr>
<tr>
<td>Fraction calculators</td>
<td>44 (2.3)</td>
<td>21 (1.6)</td>
<td>34 (2.0)</td>
</tr>
<tr>
<td>Graphing calculators</td>
<td>26 (2.0)</td>
<td>29 (2.0)</td>
<td>45 (2.2)</td>
</tr>
<tr>
<td>Scientific calculators</td>
<td>25 (1.7)</td>
<td>24 (1.5)</td>
<td>51 (2.2)</td>
</tr>
<tr>
<td>Computers</td>
<td>46 (2.2)</td>
<td>48 (2.2)</td>
<td>6 (0.8)</td>
</tr>
<tr>
<td>Calculator/computer lab interfacing devices</td>
<td>72 (1.9)</td>
<td>25 (1.9)</td>
<td>3 (0.5)</td>
</tr>
<tr>
<td>Computers with Internet connection</td>
<td>63 (2.0)</td>
<td>34 (2.0)</td>
<td>3 (1.0)</td>
</tr>
</tbody>
</table>

Table MTQ 29
Estimated Amount of Own Money Mathematics Teachers Spend on Supplies per Class

<table>
<thead>
<tr>
<th>Grades</th>
<th>Median Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>K–4</td>
<td>$40</td>
</tr>
<tr>
<td>5–8</td>
<td>$50</td>
</tr>
<tr>
<td>9–12</td>
<td>$50</td>
</tr>
</tbody>
</table>

Table MTQ 30
Estimated Amount of Own Money Mathematics Teachers Spend on Professional Development

<table>
<thead>
<tr>
<th>Grades</th>
<th>Median Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>K–4</td>
<td>$0</td>
</tr>
<tr>
<td>5–8</td>
<td>$40</td>
</tr>
<tr>
<td>9–12</td>
<td>$50</td>
</tr>
</tbody>
</table>
### Table MTQ 31.1
**Grade K–4 Mathematics Classes Where Teachers Report Having Control Over Various Curriculum and Instruction Decisions**

<table>
<thead>
<tr>
<th></th>
<th>Percent of Classes</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Control</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Determining course goals and objectives</td>
<td>30 (2.2)</td>
<td>17 (1.9)</td>
<td>26 (2.2)</td>
<td>15 (1.8)</td>
<td>12 (1.6)</td>
</tr>
<tr>
<td>Selecting textbooks/instructional programs</td>
<td>29 (2.1)</td>
<td>24 (1.9)</td>
<td>28 (2.1)</td>
<td>13 (1.5)</td>
<td>5 (1.0)</td>
</tr>
<tr>
<td>Selecting other instructional materials</td>
<td>5 (1.0)</td>
<td>7 (1.2)</td>
<td>30 (2.3)</td>
<td>28 (2.3)</td>
<td>30 (1.9)</td>
</tr>
<tr>
<td>Selecting content, topics, and skills to be taught</td>
<td>26 (3.0)</td>
<td>19 (1.8)</td>
<td>28 (2.3)</td>
<td>18 (2.1)</td>
<td>9 (1.3)</td>
</tr>
<tr>
<td>Selecting the sequence in which topics are covered</td>
<td>13 (1.9)</td>
<td>9 (1.2)</td>
<td>21 (2.5)</td>
<td>21 (2.1)</td>
<td>36 (2.6)</td>
</tr>
<tr>
<td>Setting the pace for covering topics</td>
<td>5 (1.2)</td>
<td>10 (1.5)</td>
<td>17 (2.2)</td>
<td>22 (2.2)</td>
<td>45 (2.8)</td>
</tr>
<tr>
<td>Selecting teaching techniques</td>
<td>1 (0.5)</td>
<td>2 (0.8)</td>
<td>10 (1.6)</td>
<td>24 (2.3)</td>
<td>63 (2.5)</td>
</tr>
<tr>
<td>Determining the amount of homework to be assigned</td>
<td>3 (1.2)</td>
<td>1 (0.5)</td>
<td>11 (1.7)</td>
<td>17 (1.8)</td>
<td>68 (2.6)</td>
</tr>
<tr>
<td>Choosing criteria for grading students</td>
<td>4 (0.8)</td>
<td>7 (1.5)</td>
<td>21 (2.0)</td>
<td>22 (2.1)</td>
<td>45 (2.8)</td>
</tr>
<tr>
<td>Choosing tests for classroom assessment</td>
<td>8 (1.6)</td>
<td>8 (1.3)</td>
<td>19 (2.1)</td>
<td>23 (2.1)</td>
<td>42 (2.5)</td>
</tr>
</tbody>
</table>

### Table MTQ 31.2
**Grade 5–8 Mathematics Classes Where Teachers Report Having Control Over Various Curriculum and Instruction Decisions**

<table>
<thead>
<tr>
<th></th>
<th>Percent of Classes</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Control</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Determining course goals and objectives</td>
<td>24 (2.4)</td>
<td>14 (1.8)</td>
<td>23 (2.3)</td>
<td>18 (1.9)</td>
<td>20 (2.6)</td>
</tr>
<tr>
<td>Selecting textbooks/instructional programs</td>
<td>26 (2.6)</td>
<td>14 (1.2)</td>
<td>26 (2.5)</td>
<td>20 (2.1)</td>
<td>14 (1.7)</td>
</tr>
<tr>
<td>Selecting other instructional materials</td>
<td>5 (1.0)</td>
<td>6 (1.2)</td>
<td>23 (2.5)</td>
<td>25 (2.2)</td>
<td>41 (2.4)</td>
</tr>
<tr>
<td>Selecting content, topics, and skills to be taught</td>
<td>21 (2.7)</td>
<td>15 (1.7)</td>
<td>22 (2.2)</td>
<td>22 (2.1)</td>
<td>20 (3.1)</td>
</tr>
<tr>
<td>Selecting the sequence in which topics are covered</td>
<td>9 (2.2)</td>
<td>7 (1.3)</td>
<td>13 (1.9)</td>
<td>21 (1.9)</td>
<td>50 (3.2)</td>
</tr>
<tr>
<td>Setting the pace for covering topics</td>
<td>4 (1.3)</td>
<td>5 (0.9)</td>
<td>15 (1.7)</td>
<td>27 (2.2)</td>
<td>49 (2.5)</td>
</tr>
<tr>
<td>Selecting teaching techniques</td>
<td>1 (0.3)</td>
<td>2 (0.8)</td>
<td>7 (1.7)</td>
<td>20 (2.1)</td>
<td>71 (2.7)</td>
</tr>
<tr>
<td>Determining the amount of homework to be assigned</td>
<td>1 (0.4)</td>
<td>1 (0.4)</td>
<td>4 (0.9)</td>
<td>22 (2.2)</td>
<td>72 (2.5)</td>
</tr>
<tr>
<td>Choosing criteria for grading students</td>
<td>2 (0.9)</td>
<td>2 (0.7)</td>
<td>11 (1.8)</td>
<td>30 (2.4)</td>
<td>56 (2.3)</td>
</tr>
<tr>
<td>Choosing tests for classroom assessment</td>
<td>1 (0.5)</td>
<td>4 (1.0)</td>
<td>6 (1.3)</td>
<td>23 (2.4)</td>
<td>66 (2.7)</td>
</tr>
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</table>
### Table MTQ 31.3

**Grade 9–12 Mathematics Classes Where Teachers Report Having Control Over Various Curriculum and Instruction Decisions**

<table>
<thead>
<tr>
<th></th>
<th>No Control</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strong Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining course goals and objectives</td>
<td>17 (1.6)</td>
<td>11 (1.2)</td>
<td>20 (1.7)</td>
<td>25 (1.9)</td>
<td>27 (2.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selecting textbooks/instructional programs</td>
<td>21 (2.2)</td>
<td>12 (1.0)</td>
<td>21 (1.5)</td>
<td>21 (1.9)</td>
<td>25 (2.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selecting other instructional materials</td>
<td>4 (0.7)</td>
<td>4 (0.6)</td>
<td>19 (1.7)</td>
<td>29 (1.9)</td>
<td>44 (2.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selecting content, topics, and skills to be taught</td>
<td>13 (1.4)</td>
<td>12 (1.1)</td>
<td>20 (1.6)</td>
<td>28 (2.0)</td>
<td>27 (2.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selecting the sequence in which topics are covered</td>
<td>4 (0.6)</td>
<td>5 (0.6)</td>
<td>12 (1.5)</td>
<td>27 (1.6)</td>
<td>52 (2.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting the pace for covering topics</td>
<td>2 (0.3)</td>
<td>7 (0.7)</td>
<td>12 (1.2)</td>
<td>29 (1.6)</td>
<td>50 (1.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selecting teaching techniques</td>
<td>0 (0.2)</td>
<td>1 (0.2)</td>
<td>3 (0.5)</td>
<td>22 (1.6)</td>
<td>74 (1.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determining the amount of homework to be assigned</td>
<td>0 (0.2)</td>
<td>1 (0.3)</td>
<td>3 (0.8)</td>
<td>15 (1.4)</td>
<td>82 (1.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choosing criteria for grading students</td>
<td>1 (0.3)</td>
<td>1 (0.4)</td>
<td>7 (1.1)</td>
<td>21 (1.6)</td>
<td>70 (1.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choosing tests for classroom assessment</td>
<td>1 (0.3)</td>
<td>1 (0.3)</td>
<td>3 (0.6)</td>
<td>16 (1.5)</td>
<td>79 (1.6)</td>
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</tr>
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</table>

### Table MTQ 32

**Amount of Homework Assigned in Mathematics Classes per Week**

<table>
<thead>
<tr>
<th></th>
<th>Percent of Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>0–30 minutes</td>
<td>48 (2.3)</td>
</tr>
<tr>
<td>31–60 minutes</td>
<td>27 (2.3)</td>
</tr>
<tr>
<td>61–90 minutes</td>
<td>13 (1.8)</td>
</tr>
<tr>
<td>91–120 minutes</td>
<td>8 (1.3)</td>
</tr>
<tr>
<td>2–3 hours</td>
<td>3 (0.9)</td>
</tr>
<tr>
<td>More than 3 hours</td>
<td>1 (0.4)</td>
</tr>
</tbody>
</table>

### Table 33a

**Mathematics Classes Using Commercially-Published Textbooks or Programs**

<table>
<thead>
<tr>
<th></th>
<th>Percent of Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>Grades K–4</td>
<td>87 (1.6)</td>
</tr>
<tr>
<td>Grades 5–8</td>
<td>92 (1.3)</td>
</tr>
<tr>
<td>Grades 9–12</td>
<td>94 (0.8)</td>
</tr>
</tbody>
</table>
### Table MTQ 33b
Use of Commercially-Published Textbooks or Programs in Mathematics Classes

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use one textbook or program all or most of the time</td>
<td>62 (2.6)</td>
<td>66 (2.2)</td>
<td>79 (1.4)</td>
</tr>
<tr>
<td>Use multiple textbooks/programs</td>
<td>25 (2.4)</td>
<td>25 (2.1)</td>
<td>15 (1.3)</td>
</tr>
</tbody>
</table>

### Table MTQ 34
Publishers of Textbooks/Programs Used in Mathematics Classes

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addison Wesley Longman, Inc./Scott Foresman</td>
<td>20 (3.0)</td>
<td>16 (2.0)</td>
<td>12 (1.4)</td>
</tr>
<tr>
<td>Brooks/Cole Publishing Co</td>
<td>0 —*</td>
<td>0 —*</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>CORD Communications</td>
<td>0 —*</td>
<td>0 —*</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Creative Publications</td>
<td>2 (0.7)</td>
<td>1 (0.6)</td>
<td>0 —*</td>
</tr>
<tr>
<td>Dale Seymour Publications†</td>
<td>2 (0.9)</td>
<td>3 (0.7)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>EFA &amp; Associates</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 —*</td>
</tr>
<tr>
<td>Encyclopaedia Britannica</td>
<td>0 —*</td>
<td>0 (0.1)</td>
<td>0 —*</td>
</tr>
<tr>
<td>Everyday Learning Corporation</td>
<td>7 (1.7)</td>
<td>4 (1.4)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Globe Fearon, Inc/Camridge</td>
<td>0 —*</td>
<td>0 (0.1)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Harcourt Brace/Harcourt, Brace &amp; Jovanovich</td>
<td>16 (2.5)</td>
<td>10 (1.9)</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Holt, Rinehart and Winston, Inc</td>
<td>0 (0.3)</td>
<td>0 (0.2)</td>
<td>4 (0.8)</td>
</tr>
<tr>
<td>Houghton Mifflin Company/McDougal Littell/D.C. Heath</td>
<td>15 (2.4)</td>
<td>18 (2.4)</td>
<td>27 (2.0)</td>
</tr>
<tr>
<td>Kendall Hunt Publishing</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Key Curriculum Press</td>
<td>0 —*</td>
<td>0 (0.1)</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>McGraw-Hill/Merrill Co</td>
<td>10 (2.6)</td>
<td>22 (2.3)</td>
<td>22 (1.8)</td>
</tr>
<tr>
<td>Optical Data Corporation</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 —*</td>
</tr>
<tr>
<td>Prentice Hall, Inc.</td>
<td>0 —*</td>
<td>6 (1.2)</td>
<td>13 (2.4)</td>
</tr>
<tr>
<td>Saxon Publishers</td>
<td>11 (2.5)</td>
<td>8 (1.9)</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Silver Burdett Ginn</td>
<td>11 (2.4)</td>
<td>3 (0.7)</td>
<td>0 —*</td>
</tr>
<tr>
<td>South-Western Educational Publishing</td>
<td>0 —*</td>
<td>0 (0.3)</td>
<td>3 (0.7)</td>
</tr>
<tr>
<td>Video Text Interactive</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 —*</td>
</tr>
<tr>
<td>Wadsworth Publishing</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 —*</td>
</tr>
<tr>
<td>West Educational Publishing</td>
<td>0 —*</td>
<td>0 —*</td>
<td>0 (0.3)</td>
</tr>
<tr>
<td>“Others” specified:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aamsco</td>
<td>0 —*</td>
<td>0 (0.1)</td>
<td>5 (1.1)</td>
</tr>
<tr>
<td>A-Beka</td>
<td>1 (0.4)</td>
<td>3 (1.8)</td>
<td>0 —*</td>
</tr>
<tr>
<td>Open Court</td>
<td>2 (1.3)</td>
<td>0 —*</td>
<td>0 —*</td>
</tr>
</tbody>
</table>

* No teachers in the sample selected this response option. Thus, it is not possible to calculate the standard error of this estimate.
† Between the time data were collected and this report was released, Dale Seymour Publications was bought by Prentice Hall.
There is no table for MTQ 35a.

### Table MTQ 35b
**Percentage of Mathematics Textbooks/Programs Covered During the Course**

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25%</td>
<td>1 (0.4)</td>
<td>1 (0.5)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>25–49%</td>
<td>3 (1.0)</td>
<td>5 (1.1)</td>
<td>6 (0.8)</td>
</tr>
<tr>
<td>50–74%</td>
<td>17 (2.2)</td>
<td>27 (2.5)</td>
<td>28 (2.0)</td>
</tr>
<tr>
<td>75–90%</td>
<td>38 (2.7)</td>
<td>46 (3.3)</td>
<td>47 (2.4)</td>
</tr>
<tr>
<td>&gt;90%</td>
<td>41 (3.0)</td>
<td>21 (2.2)</td>
<td>19 (1.5)</td>
</tr>
</tbody>
</table>

† Only classes using published textbooks/programs were included in these analyses.

### Table MTQ 35c
**Teachers’ Perceptions of Quality of Textbooks/Programs Used in Mathematics Classes**

<table>
<thead>
<tr>
<th>Percent of Classes</th>
<th>Grades K–4</th>
<th>Grades 5–8</th>
<th>Grades 9–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>1 (0.5)</td>
<td>2 (0.7)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Poor</td>
<td>3 (0.9)</td>
<td>5 (1.3)</td>
<td>3 (0.6)</td>
</tr>
<tr>
<td>Fair</td>
<td>18 (2.3)</td>
<td>16 (1.7)</td>
<td>19 (1.7)</td>
</tr>
<tr>
<td>Good</td>
<td>34 (2.7)</td>
<td>34 (2.4)</td>
<td>35 (2.1)</td>
</tr>
<tr>
<td>Very Good</td>
<td>36 (2.8)</td>
<td>33 (2.6)</td>
<td>34 (2.1)</td>
</tr>
<tr>
<td>Excellent</td>
<td>8 (1.5)</td>
<td>10 (1.9)</td>
<td>9 (1.3)</td>
</tr>
</tbody>
</table>

### Table MTQ 36a
**Average Length of Most Recent Mathematics Lesson**

<table>
<thead>
<tr>
<th>Number of Minutes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades K–4</td>
<td>52 (0.9)</td>
</tr>
<tr>
<td>Grades 5–8</td>
<td>55 (0.7)</td>
</tr>
<tr>
<td>Grades 9–12</td>
<td>62 (1.1)</td>
</tr>
</tbody>
</table>
Table MTQ 36b  
Time Spent on Various Types of Activities in Most Recent Mathematics Lesson

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percent of Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>Daily routines, interruptions, and other non-instructional activities</td>
<td>10 (0.4)</td>
</tr>
<tr>
<td>Whole class lecture/discussions</td>
<td>27 (0.7)</td>
</tr>
<tr>
<td>Individual students reading textbooks, completing worksheets, etc.</td>
<td>24 (1.1)</td>
</tr>
<tr>
<td>Working with hands-on or manipulative materials</td>
<td>27 (1.2)</td>
</tr>
<tr>
<td>Non-manipulative small group work</td>
<td>8 (0.7)</td>
</tr>
<tr>
<td>Other activities</td>
<td>4 (0.6)</td>
</tr>
</tbody>
</table>

Table MTQ 37  
Mathematics Classes Participating in Various Activities in Most Recent Lesson

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percent of Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>Lecture</td>
<td>68 (2.4)</td>
</tr>
<tr>
<td>Discussion</td>
<td>89 (1.7)</td>
</tr>
<tr>
<td>Students completing textbook/worksheet problems</td>
<td>77 (2.2)</td>
</tr>
<tr>
<td>Students doing hands-on/manipulative activities</td>
<td>75 (2.2)</td>
</tr>
<tr>
<td>Students reading about mathematics</td>
<td>17 (1.6)</td>
</tr>
<tr>
<td>Students working in small groups</td>
<td>52 (2.7)</td>
</tr>
<tr>
<td>Students using calculators</td>
<td>5 (0.9)</td>
</tr>
<tr>
<td>Students using computers</td>
<td>7 (1.1)</td>
</tr>
<tr>
<td>Students using other technologies</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td>Test or quiz</td>
<td>13 (1.7)</td>
</tr>
<tr>
<td>None of the above</td>
<td>0 (0.2)</td>
</tr>
</tbody>
</table>

Table MTQ 38  
Mathematics Taught on Most Recent Day of School

<table>
<thead>
<tr>
<th>Percent of Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades K–4</td>
</tr>
<tr>
<td>Grades 5–8</td>
</tr>
<tr>
<td>Grades 9–12</td>
</tr>
</tbody>
</table>

Table MTQ 39  
Gender of Mathematics Teachers

<table>
<thead>
<tr>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades K–4</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
</tbody>
</table>
### Table MTQ 40
#### Race/Ethnicity of Mathematics Teachers

<table>
<thead>
<tr>
<th></th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>American Indian or Alaskan Native</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Asian</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>4 (0.8)</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>5 (1.2)</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td>White</td>
<td>90 (1.5)</td>
</tr>
</tbody>
</table>

† Percents may not add to 100 because respondents were given the option of selecting more than one category. Of the mathematics teachers responding to the survey, 97 percent selected only one category, 1 percent selected more than one category, and 2 percent selected no category.

### Table MTQ 41
#### Age of Mathematics Teachers

<table>
<thead>
<tr>
<th></th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>Less than 31 years old</td>
<td>21 (2.0)</td>
</tr>
<tr>
<td>31–40 years old</td>
<td>21 (1.9)</td>
</tr>
<tr>
<td>41–50 years old</td>
<td>31 (2.4)</td>
</tr>
<tr>
<td>More than 50 years old</td>
<td>27 (2.4)</td>
</tr>
</tbody>
</table>

### Table MTQ 42
#### Number of Years Teaching

<table>
<thead>
<tr>
<th></th>
<th>Percent of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grades K–4</td>
</tr>
<tr>
<td>0–2 years</td>
<td>18 (1.9)</td>
</tr>
<tr>
<td>3–5 years</td>
<td>13 (1.5)</td>
</tr>
<tr>
<td>6–10 years</td>
<td>14 (1.6)</td>
</tr>
<tr>
<td>11–20 years</td>
<td>26 (2.0)</td>
</tr>
<tr>
<td>More than 20 years</td>
<td>29 (2.4)</td>
</tr>
</tbody>
</table>