Wisconsin Center for Education Research
Council of Chief State School Officers

SURVEYS OF ENACTED CURRICULUM©

Survey Of Instructional Practices
Teacher Survey
Grades K-12
Mathematics

Thank you for agreeing to participate in this survey of instructional practices and content. This survey is part of a collaborative effort to provide education researchers, policymakers, administrators, and most importantly, teachers like yourself with comparative information about instruction from states and districts around the country. To learn more about the surveys of enacted curriculum and their use in other projects, please visit the project website at: http://www.seconline.org

Your participation in this survey is voluntary. If you choose to participate, your personal information will remain strictly confidential. Information that could be used to identify you or connect you to individual results will not be shared with staff in your school, district, or state. Individual respondents are never identified in any reports of results. The questionnaire poses no risk to you, and there is no penalty for refusal to participate. You may withdraw from the study simply by returning the questionnaire without completing it, without penalty or loss of services or benefits to which you would be otherwise entitled.

☐ I have read and understand the statement above regarding my rights to confidentiality in completing this survey.

If you have any questions regarding your rights as a research participant, please contact the Surveys of Enacted Curriculum project director; John Smithson at (608) 263-4354, or the University of Wisconsin-Madison School of Education's Human Subjects Committee office at (608) 262-2463.

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Reporting Period: Most recent school year (current year, if reporting after March 1st)

Instructions for Selecting the Target Class

Mathematics instruction: For all questions, please refer only to activities that are part of Mathematics instruction. If you teach more than one class, respond only for the first class that you teach each week. If that is a split class (i.e., the class contains more than one group for language arts instruction and each group is taught separately), respond for only one group.

Please read each question and its response choices carefully, and then mark your response by filling in an appropriate response circle. A pen or pencil may be used to complete the survey.

Survey of Instructional Practices for Mathematics

SCHOOL DESCRIPTION

SD.1 Which of these categories best describe the way your mathematics classes at this school are organized? (Check all that apply)

① Departmentalized Instruction
② Subject-Area Specialist (non-departmental)
③ Self-Contained (i.e., teach multiple subjects)
④ Team Taught

SD.2 If your school is departmentalized, or if you are a subject-area specialist, how many different mathematics classes do you currently teach?

⓪ ① ② ③ ④ ⑤ ⑥ ⑦
(Number of classes taught)

CLASS DESCRIPTION

CD.1 Which term best describes the target class, or course, you are teaching?

① Elementary Math
② Middle School Math
③ Pre-algebra
④ Algebra
⑤ Integrated Math
⑥ Geometry
⑦ Trigonometry
⑧ Advanced Math
⑨ Calculus
⓪ Other

CLASS DESCRIPTION (cont.)

CD.2 What is the grade level of most of the students in the target class?

⓪	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
K	1	2	3	4	5	6	7	8	9	10	11	12

CD.3 How many students are in the target class?

⓪ 10 or fewer
① 11 to 15
② 16 to 20
③ 21 to 25
④ 26 to 30
⑤ 31 or more

CD.4 What percentage of the students in the target class are <u>not</u> Caucasian? (Mark nearest 10%)

⓪	①	②	③	④	⑤	⑥	⑦	⑧	⑨
Less than 10	10	20	30	40	50	60	70	80	90+ %

CD.5 What percentage of students in the target class are Limited English Proficient (LEP)?

⓪ None
① Less than 10%
② 10% to 25%
③ 26% to 50%
④ More than 50%

CD.6 What percentage of the students in the target class HAVE IEP's? (Mark nearest 10%)

⓪	①	②	③	④	⑤	⑥	⑦	⑧	⑨
Less than 10	10	20	30	40	50	60	70	80	90+ %

CD.7 How many students with significant cognitive disabilities are in the target class?

⓪	①	②	③	④	⑤	⑥
None	1	2	3	4	5	More than 5

CD.8 <u>During a typical week</u>, approximately how many hours will the target class spend in mathematics instruction?

Number of instructional hours=

⓪	①	②	③	④	⑤	⑥	⑦	⑧	⑨
0	1	2	3	4	5	6	7	8	9

CD.9 What is the average length of each class period for the target mathematics class?

⓪ Not applicable
① 30 to 40 minutes
② 41 to 50 minutes
③ 51 to 60 minutes
④ 61 to 90 minutes
⑤ 91 to 120 minutes
⑥ Varies due to block scheduling or integrated

CD.10 For how many weeks will the target mathematics class meet this school year in total?

Total number of weeks=

⓪	①	②
1 to 12	13 to 24	25 or more

CD.11 What is the achievement level of most of the students in the target class, compared to national norms?

① High achievement levels
② Average achievement levels
③ Low achievement levels
④ Mixed achievement levels

CD.12 What is considered <u>most</u> in scheduling students into the target class?

⓪ Ability or prior achievement
① Limited English proficiency
② Teacher recommendation
③ IEP RECOMMENDATION
④ Parent request
⑤ Student decision
⑥ No one factor more than another

HOMEWORK (work assigned to be completed *outside of class*)

Answer the following questions with regard to your target class:

HW.1 How often do you usually assign mathematics homework to be completed outside of class?

⓪ Never (Skip to question IP.1)
① Less than once per week
② Once or twice per week
③ Three to four times per week
④ Every day

HW.2 How many minutes do you expect a typical student to spend on a normal homework assignment completed outside of class?

⓪ I do not assign homework
① Less than 15 minutes
② From 15 to 30 minutes
③ From 31 to 60 minutes
④ From 61 to 90 minutes
⑤ More than 90 minutes

HW.3 Does homework completed outside of class count toward student grades?

⓪ Never
① Usually does not
② Usually does
③ Always does

HW.4 How often do you assign homework to be completed in a small group outside of class?

⓪ Never
① Less than once per week
② Once or twice per week
③ Three to four times per week
④ Every day

AMOUNT OF HOMEWORK TIME

0 - None
1 - Little (*Less than 10% of homework time outside of class*)
2 - Some (*10-25% of homework time outside of class*)
3 - Moderate (*26-50% of homework time outside of class*)
4 - Considerable (*More than 50% of homework time outside of class)*

What percentage of the time that students in the target class spend on mathematics homework done *outside of class* do you expect them to:		**None**	**Little**	**Some**	**Moderate**	**Considerable**
HW.5	Complete computational exercises or procedures from a textbook or worksheet	⓪	①	②	③	④
HW.6	Solve word problems from a textbook or worksheet	⓪	①	②	③	④
HW.7	Explain, using several sentences, their reasoning or thinking in solving a problem	⓪	①	②	③	④
HW.8	Work on a demonstration or proof of their mathematics work	⓪	①	②	③	④
HW.9	Collect data as part of mathematics homework	⓪	①	②	③	④
HW.10	Work on an assignment, report, or project that takes longer than one week to complete	⓪	①	②	③	④
HW.11	Solve novel or non-routine mathematical problems	⓪	①	②	③	④

INSTRUCTIONAL ACTIVITIES IN MATHEMATICS

Listed below are questions about the types of activities **that students in the target class** may engage in during mathematics instruction. Please estimate the relative amount of time a typical student in your class will spend engaged in *each activity* over the course of a school year. The activities are not necessarily mutually exclusive; across activities, **your answers will probably exceed 100%**. Consider each activity on its own, estimating the range that best indicates the relative amount of mathematics instructional time that a typical student in your target class engages in over the course of a school year for that category.

AMOUNT OF INSTRUCTIONAL TIME

0 - None
1 - Little *(Less than 10% of instructional time for the school year)*
2 - Some *(10-25% of instructional time for the school year)*
3 - Moderate *(26-50% of instructional time for the school year)*
4 - Considerable *(More than 50% of instructional time for the school year)*

How much of the mathematics instructional time in the target class do students use to engage in the following tasks?		***None***	***Little***	***Some***	***Moderate***	***Considerable***
IP.1	Listen to the teacher explain, or observe the teacher demonstrate or model a math procedure or solve a problem	⓪	①	②	③	④
IP.2	Read and comprehend mathematics information from multiple sources	⓪	①	②	③	④
IP.3	Collect, summarize, and/or analyze information or data from multiple sources	⓪	①	②	③	④
IP.4	Present or demonstrate to others	⓪	①	②	③	④
IP.5	Work *individually* on mathematics assignments	⓪	①	②	③	④
IP.6	Participate in whole-class discussions about mathematics	⓪	①	②	③	④
IP.7	Engage in a writing process to support arguments with evidence	⓪	①	②	③	④
IP.8	Use hands-on materials	⓪	①	②	③	④
IP.9	Work in pairs or small groups on mathematics exercises, problems, investigations, or tasks	⓪	①	②	③	④
IP.10	Engage in learning activities outside the classroom	⓪	①	②	③	④
IP.11	Use computers, calculators, or other technology to learn, practice or explore mathematics	⓪	①	②	③	④
IP.12	Maintain and reflect on a portfolio of their own work	⓪	①	②	③	④
IP.13	Practice test-taking strategies	⓪	①	②	③	④
IP.14	Take a quiz or test	⓪	①	②	③	④

Listed below are some questions about what students in the target class do in mathematics. For each activity pick one of the choices to indicate the percentage of instructional time that students are doing each activity. Please think of an average student in the class while responding.

AMOUNT OF INSTRUCTIONAL TIME (***Working individually*** *)*

0 - None

1 - Little *(Less than 10% of individual work time on mathematical exercises, problems, or tasks)*

2 - Some *(10-25% of individual work time on mathematical exercises, problems, or tasks*)

3 - Moderate *(26-50% of individual work time on mathematical exercises, problems, or tasks)*

4 - Considerable *(More than 50% of individual work time on mathematical exercises, problems, or tasks)*

When students in the target class work *individually* on mathematics exercises, problems, investigations, or tasks, how much of that time do they:		***None***	***Little***	***Some***	***Moderate***	***Considerable***
IPA.1	Solve word problems from a textbook or worksheet	⓪	①	②	③	④
IPA.2	Solve mathematical problems that require novel or non-formulaic thinking	⓪	①	②	③	④
IPA.3	Explain their reasoning or thinking in solving a problem by using several sentences orally or in writing	⓪	①	②	③	④
IPA.4	Apply mathematical concepts to real-world problems	⓪	①	②	③	④
IPA.5	Make predictions and/or generate hypotheses	⓪	①	②	③	④
IPA.6	Analyze data to make inferences or draw conclusions	⓪	①	②	③	④
IPA.7	Assess the accuracy, credibility, and/or relevance of mathematical precision	⓪	①	②	③	④
IPA.8	Work with manipulatives to understand mathematical concepts	⓪	①	②	③	④

AMOUNT OF INSTRUCTIONAL TIME ***(Working in pairs or small groups)***

0 - None

1 - Little *(Less than 10% of instructional time in pairs or small groups)*

2 - Some *(10-25% of instructional time in pairs or small groups)*

3 - Moderate *(26-50% of instructional time in pairs or small groups)*

4 - Considerable *(More than 50% of instructional time in pairs or small groups)*

When students in the target class work *in pairs or small groups* on mathematics exercises, problems, investigations, or tasks, how much of that time do they:		***None***	***Little***	***Some***	***Moderate***	***Considerable***
IPB.1	Solve word problems from a textbook or worksheet	⓪	①	②	③	④
IPB.2	Solve mathematical problems that require novel or non-formulaic thinking	⓪	①	②	③	④
IPB.3	Talk about their reasoning or thinking in solving a problem	⓪	①	②	③	④
IPB.4	Apply mathematical concepts to "real-world" problems	⓪	①	②	③	④
IPB.5	Analyze data to make inferences or draw conclusions	⓪	①	②	③	④
IPB.6	Review assignments or prepare for a quiz or test	⓪	①	②	③	④
IPB.7	Make predictions and/or generate conjectures	⓪	①	②	③	④
IPB.8	Work on a non-routine problem that takes an extended period of time to solve	⓪	①	②	③	④
IPB.9	Participate in simulations	⓪	①	②	③	④
IPB.10	Work on a project in which group members seek peer comments to improve work	⓪	①	②	③	④
IPB.11	Work with manipulatives to understand mathematical concepts	⓪	①	②	③	④

AMOUNT OF INSTRUCTIONAL TIME ***(Use of hands-on materials in mathematics)***

0 - None

1 - Little *(Less than 10% of instructional time using hands-on materials)*

2 - Some *(10-25% of instructional time using hands-on materials)*

3 - Moderate *(26-50% of instructional time using hands-on materials)*

4 - Considerable *(More than 50% of instructional time using hands-on materials)*

When students in the target class use *hands-on materials as part of mathematics instruction* , how much of that time do they:	***None***	***Little***	***Some***	***Moderate***	***Considerable***
IPC.1 To model mathematical concepts	⓪	①	②	③	④
IPC.2 To gather evidence	⓪	①	②	③	④
IPC.3 To do mathematical constructions	⓪	①	②	③	④
IPC.4 To provide evidence to support arguments	⓪	①	②	③	④

AMOUNT OF INSTRUCTIONAL TIME ***(Collecting, organizing, displaying and/or presenting data)***

0 - None

1 - Little (Less than 10% of instructional time c*ollecting, organizing, displaying and/or presenting data*)

2 - Some (10-25% of instructional time c*ollecting, organizing, displaying and/or presenting data*)

3 - Moderate (26-50% of instructional time c*ollecting, organizing, displaying and/or presenting data*)

4 - Considerable (More than 50% of instructional time *collecting, organizing, displaying and/or presenting data*)

When students in the target class collect, organize, display and/or present data as part of mathematics instruction, how much of that time do they:	***None***	***Little***	***Some***	***Moderate***	***Considerable***
IPD.1 Collect data by counting, measuring or observing	⓪	①	②	③	④
IPD.2 Collect data by questioning, interviewing or conducting surveys	⓪	①	②	③	④
IPD.3 Organize data using models, charts, graphs, exhibits, and/or maps	⓪	①	②	③	④
IPD.4 Analyze and interpret data	⓪	①	②	③	④
IPD.5 Document sources of information	⓪	①	②	③	④
IPD.6 Design their own investigation or experiment to solve a problem	⓪	①	②	③	④
IPD.7 Change a parameter in an equation to test a hypothesis	⓪	①	②	③	④

AMOUNT OF INSTRUCTIONAL TIME ***(Use of calculators, computers, or other educational technology)***

0 - None
1 - Little *(Less than 10% of instructional time using calculators, computers, or other educational technology)*
2 - Some *(10-25% of instructional time using calculators, computers, or other educational technology)*
3 - Moderate *(26-50% of instructional time using calculators, computers, or other educational technology)*
4 - Considerable *(More than 50% of instructional time using calculators, computers, or other educational technology)*

When students in the target class are engaged in activities that involve the use of *calculators, computers, or other educational technology* as part of mathematics instruction, how much of that time do they:		***None***	***Little***	***Some***	***Moderate***	***Considerable***
IPE.1	Learn facts	⓪	①	②	③	④
IPE.2	Practice skills and procedures	⓪	①	②	③	④
IPE.3	Collect information	⓪	①	②	③	④
IPE.4	Store, retrieve or share data or information	⓪	①	②	③	④
IPE.5	Display and analyze data	⓪	①	②	③	④
IPE.6	Create multi-media presentations	⓪	①	②	③	④
IPE.7	Use technology to solve problems	⓪	①	②	③	④
IPE.8	Take an assessment online	⓪	①	②	③	④
IPE.9	Communicate electronically	⓪	①	②	③	④
IPE.10	Organize, outline, or summarize information	⓪	①	②	③	④

ASSESSMENT STRATEGIES

Please indicate how often you use each of the following strategies when assessing students in the target mathematics class.

		Not at all	1 - 4 times per year	1 - 3 times per month	1 - 3 times per week	4 - 5 times per week
AS.1	Objective items (e.g., multiple choice or true/false)	⓪	①	②	③	④
AS.2	Short answer questions such as performing a mathematical procedure	⓪	①	②	③	④
AS.3	Extended response item for which student must explain or justify solution	⓪	①	②	③	④
AS.4	Performance tasks or events (e.g., hands-on activities)	⓪	①	②	③	④
AS.5	Individual or group demonstration or presentation	⓪	①	②	③	④
AS.6	Mathematics projects	⓪	①	②	③	④
AS.7	Portfolios	⓪	①	②	③	④
AS.8	Systematic observation of students	⓪	①	②	③	④

ASSESSMENT CHARACTERISTICS

*EXTENT OF USE (**answers may exceed 100% across items**)*

0 - None

1 - Little (Less than 10% of assessments for the school year)

2 - Some (10-25% of assessments for the school year)

3 - Moderate (26-50% of assessments for the school year)

4 - Considerable (More than 50% of assessments for the school year)

Please indicate the extent to which the following characteristics describe your assessment practices for the target class.		**None**	**Little**	**Some**	**Moderate**	**Considerable**
AC.1	Focused on application of content	⓪	①	②	③	④
AC.2	Focused on information recall	⓪	①	②	③	④
AC.3	Focused on applying understandings and knowledge	⓪	①	②	③	④
AC.4	Use authentic contexts (e.g., real-world simulation, project- based or cross-disciplinary problems)	⓪	①	②	③	④
AC.5	Provide written feedback to develop further student understanding	⓪	①	②	③	④
AC.6	Provide verbal feedback to develop further student understanding	⓪	①	②	③	④
AC.7	Require students to explain, reason, support conclusions, and use appropriate sources as evidence	⓪	①	②	③	④
AC.8	Use of rubrics/scoring guides to analyze student work	⓪	①	②	③	④
AC.9	Results used to adjust teaching methods within current unit	⓪	①	②	③	④
AC.10	Provide students opportunities to evaluate their own work	⓪	①	②	③	④
AC.11	Intentionally use informal assessments during a unit (e.g., exit cards, check for understanding, etc.)	⓪	①	②	③	④
AC.12	Use of assessment data in adjusting the curriculum and/or instruction	⓪	①	②	③	④

INSTRUCTIONAL INFLUENCES

Please indicate the degree to which each of the following influences what you teach in the target mathematics class.

		N/A	Strong Negative Influence	Somewhat Negative Influence	Little or No Influence	Somewhat Positive Influence	Strong Positive Influence
IN.1	Your state's curriculum framework or content standards	⓪	①	②	③	④	⑤
IN.2	Your district's curriculum framework, standards, or guidelines	⓪	①	②	③	④	⑤
IN.3	Textbook or instructional materials	⓪	①	②	③	④	⑤
IN.4	State test or results from test	⓪	①	②	③	④	⑤
IN.5	District test or results from test	⓪	①	②	③	④	⑤
IN.6	National Council of Teachers of Mathematics Education Standards	⓪	①	②	③	④	⑤
IN.7	Your pre-service preparation	⓪	①	②	③	④	⑤
IN.8	Students' special needs	⓪	①	②	③	④	⑤
IN.9	Preparation of students for next grade or level	⓪	①	②	③	④	⑤
IN.10	Local priorities, directives, or policies	⓪	①	②	③	④	⑤
IN.11	Your professional development experiences	⓪	①	②	③	④	⑤
IN.12	Screening, diagnostic, or classroom assessment results	⓪	①	②	③	④	⑤

CLASSROOM INSTRUCTIONAL READINESS

For the following items please indicated how well prepared you are to:

		Not Well Prepared	Somewhat Prepared	Well Prepared	Very Well Prepared
IR.1	Use/manage cooperative learning groups as part of mathematics instruction	⓪	①	②	③
IR.2	Integrate math with other subjects	⓪	①	②	③
IR.3	Provide mathematics instruction that meets state content standards (e.g., district, state, or national)	⓪	①	②	③
IR.4	Use a variety of assessment strategies (including objective and open-ended formats)	⓪	①	②	③
IR.5	Teach problem-solving strategies	⓪	①	②	③
IR.6	Teach mathematics with manipulatives, such as counting blocks or geometric shapes	⓪	①	②	③
IR.7	Teach math at your assigned level	⓪	①	②	③
IR.8	Develop students' communication skills in expressing mathematical concepts and procedures	⓪	①	②	③
IR.9	Teach students to reason mathematically, and to evaluate mathematical claims	⓪	①	②	③
IR.10	Select and/or adapt instructional materials to implement the prescribed curriculum	⓪	①	②	③
IR.11	Teach students with physical disabilities	⓪	①	②	③
IR.12	Help students document and evaluate their own work	⓪	①	②	③
IR.13	Teach classes with students with diverse abilities and learning styles	⓪	①	②	③
IR.14	Teach mathematics to students from a variety of cultural backgrounds	⓪	①	②	③
IR.15	Teach mathematics to students who have limited English proficiency	⓪	①	②	③
IR.16	Teach students who have learning disabilities that impact mathematics learning	⓪	①	②	③
IR.17	Organize and manage the classroom	⓪	①	②	③
IR.18	Support students' developmental and maturational needs	⓪	①	②	③
IR.19	Involve parents in the mathematics education of their children	⓪	①	②	③
IR.20	Adapt instructional materials to enhance understanding of mathematics content	⓪	①	②	③
IR.21	Integrate instruction of mathematics content with real-world or life skills	⓪	①	②	③
IR.22	Teach students who are persistently low performers	⓪	①	②	③

TEACHER OPINIONS AND BELIEFS

Please indicate your opinion about each of the statements below:

		Strongly Disagree	Disagree	Neutral/ Undecided	Agree	Strongly Agree
TO.1	Students learn mathematics best when they ask a lot of questions	⓪	①	②	③	④
TO.2	Students need to practice mathematical computation skills regularly to perform well on tests	⓪	①	②	③	④
TO.3	All students can learn challenging content in mathematics	⓪	①	②	③	④
TO.4	Students learn mathematics best in classes with students of similar abilities	⓪	①	②	③	④
TO.5	It is important for students to learn basic mathematics skills before solving problems	⓪	①	②	③	④
TO.6	I enjoy teaching mathematics	⓪	①	②	③	④
TO.7	I am supported by colleagues to try out new ideas in teaching mathematics	⓪	①	②	③	④
TO.8	I am required to follow rules at this school that conflict with my best professional judgment about teaching and learning mathematics	⓪	①	②	③	④
TO.9	Mathematics teachers in this school regularly share ideas and materials	⓪	①	②	③	④
TO.10	Mathematics teachers in this school regularly observe each other teaching classes	⓪	①	②	③	④
TO.11	I have adequate curriculum materials available for instruction	⓪	①	②	③	④
TO.12	I have many opportunities to learn new things about teaching mathematics in my present job	⓪	①	②	③	④
TO.13	I have adequate time during the regular school week to work with my peers on mathematics curriculum or instruction	⓪	①	②	③	④
TO.14	Most teachers in this school contribute actively to making decisions about the curriculum	⓪	①	②	③	④
TO.15	My school supports co-teaching and collaboration between general and special educators in the teaching of mathematics	⓪	①	②	③	④
TO.16	My school supports co-teaching and collaboration between general and ESL educators in the teaching of mathematics	⓪	①	②	③	④

PROFESSIONAL DEVELOPMENT IN MATHEMATICS

In answering the following items, consider all the professional development activities related to mathematics content or instruction that you have participated in **since June 1st of last year**. *Professional development refers to a variety of activities intended to enhance your professional knowledge and skills, including in-service training, teacher networks, course work, institutes, committee work, and mentoring. In-service training is professional development offered by your school or district to enhance your professional responsibilities and knowledge. Workshops are short-term learning opportunities that can be located in your school or elsewhere. Institutes are longer term professional learning opportunities, for example, of a week or longer in duration.*

Since June 1st of last year, how much time have you spent engaged in professional development activities focused on mathematics or mathematics education?

0 = N/A 1 = 1-5 hrs. 2 = 6-15 hrs. 3 = 16-35 hrs. 4 = 36-60 hrs. 5 = 60+ hrs.

		Amount of Time
PD.1	Workshops or in-service training related to mathematics or mathematics education?	⓪ ① ② ③ ④ ⑤
PD.2	Summer institutes related to mathematics or mathematics education?	⓪ ① ② ③ ④ ⑤
PD.3	College courses related to mathematics or mathematics education	⓪ ① ② ③ ④ ⑤

Since June 1st of last year, how frequently have you engaged in each of the following activities focused on mathematics content?

		Never	Once or twice a **year**	Once or twice a **term**	Once or twice a **month**	Once or twice a **week**	Almost **daily**
PDA.1	Attended conferences related to mathematics or mathematics education	⓪	①	②	③	④	⑤
PDA.2	Participated in teacher study groups, networks, or collaboratives	⓪	①	②	③	④	⑤
PDA.3	Used teacher resource centers or internet resources to enrich your knowledge and skills	⓪	①	②	③	④	⑤
PDA.4	Acted as a coach or mentor to others in your school	⓪	①	②	③	④	⑤
PDA.5	Received coaching or mentoring about my instruction from an activity leader, coach, or mentor	⓪	①	②	③	④	⑤
PDA.6	Worked on a committee or task force focused on curriculum and instruction	⓪	①	②	③	④	⑤
PDA.7	Engaged in informal self-directed learning (e.g., discussions with colleagues, reading articles, using internet resources) to enrich your mathematics knowledge and skills.	⓪	①	②	③	④	⑤

Thinking again about your professional development activities related to mathematics since June 1st of last year, how often has the following occurred for you?

		Never	Rarely	Sometimes	Often
PDB.1	Observed demonstrations of teaching techniques	①	②	③	④
PDB.2	Led group discussions	①	②	③	④
PDB.3	Developed curricula or lesson plans with others	①	②	③	④
PDB.4	Reviewed student work or scored assessments	①	②	③	④
PDB.5	Developed assessments or tasks as part of a formal professional development activity	①	②	③	④
PDB.6	Practiced what you learned and received feedback as part of a professional development activity	①	②	③	④
PDB.7	Received coaching or mentoring in the classroom	①	②	③	④
PDB.8	Given a lecture or presentation to colleagues	①	②	③	④

Still thinking about your professional development activities related to mathematics since June 1st of last year, indicate how often they have been:

		Never	Rarely	Sometimes	Often
PDC.1	Designed to support the school's improvement plan	①	②	③	④
PDC.2	Consistent with your department's or grade level's plan to improve teaching	①	②	③	④
PDC.3	Consistent with your personal goals for your professional development	①	②	③	④
PDC.4	Built on what you learned in previous professional development activities	①	②	③	④
PDC.5	Provided follow-up activities that related clearly to what you learned	①	②	③	④

Since June 1st of last year, have you participated in professional development activities related to mathematics or mathematics instruction in the following ways?

		No	Yes
PDD.1	I participated in professional development activities along with most or all of the teachers from my school.	⓪	①
PDD.2	I participated in professional development activities along with most or all of the teachers from my department or grade level.	⓪	①
PDD.3	I participated in professional development activities NOT attended by other staff from my school.	⓪	①
PDD.4	I discussed what I learned with other teachers in my school or department who did NOT attend the activity.	⓪	①

Since June 1st of last year, how much <u>emphasis</u> have your professional development activities related to mathematical instruction placed on the following topics?

		None	Minor	Moderate	Major
PDE.1	Alignment of mathematics instruction to curriculum frameworks and/or state content standards	①	②	③	④
PDE.2	Instructional approaches (e.g., use of manipulatives)	①	②	③	④
PDE.3	In-depth study of mathematics or specific concepts within mathematics (e.g., fractions)	①	②	③	④
PDE.4	Study of how children learn particular topics in mathematics	①	②	③	④
PDE.5	Individual differences in student learning	①	②	③	④
PDE.6	Meeting the learning needs of special populations of students (e.g., English language learners, students with disabilities)	①	②	③	④
PDE.7	Classroom assessment (e.g., diagnostic, textbook-linked tests, teacher-developed tests)	①	②	③	④
PDE.8	State or district assessment (e.g., preparing, understanding, interpreting assessment data)	①	②	③	④
PDE.9	Interpretation of assessment data to inform mathematics instruction	①	②	③	④
PDE.10	Technology to support student learning in mathematics	①	②	③	④

TEACHER CHARACTERISTICS

		Female	Male
TC.1	Please indicate your gender.	⓪	①

TC.2 Please indicate your race/ethnicity. (Indicate all that apply)

① American Indian or Alaska Native
② Asian
③ Black or African American
④ Hispanic or Latino/a
⑤ Native Hawaiian or other Pacific Islander
⑥ White

		Less than 1 year	1 - 2 years	3 - 5 years	6 - 8 years	9 - 11 years	12 - 15 years	More than 15 years
TC.3	How many years have you taught mathematics prior to this year?	⓪	①	②	③	④	⑤	⑥
TC.4	How long have you been assigned to teach at your current school?	⓪	①	②	③	④	⑤	⑥

		N/A	BA or BS	MA or MS	Multiple MA or MS	Ph.D. or Ed.D.	Other
TC.5	What is the highest degree you hold?	⓪	①	②	③	④	⑤

TC.6 What was your major field of study for the bachelor's degree?

① Elementary Education
② Middle School Education
③ Mathematics Education
④ Mathematics
⑤ Mathematics Education **and** Mathematics
⑥ Other disciplines (includes other Education fields, Science, History, English, Foreign Languages, etc.)
⑦ Special Education

TC.7 **If applicable**, what was your **major field** of study for the **highest degree you hold** beyond a bachelor's degree?

① Elementary Education
② Middle School Education
③ Mathematics Education
④ Mathematics
⑤ Mathematics Education **and** Mathematics
⑥ Other disciplines (includes other Education fields, Science, History, English, Foreign Languages, etc.)
⑦ Special Education

TC.8 What certifications do you currently possess? (Check all that apply)

① Emergency, provisional or temporary Certification
② Elementary/Early Childhood Certification
③ Middle School Certification
④ Secondary Certification, in a field other than Mathematics
⑤ Secondary Mathematics Certification
⑥ National Board Certification
⑦ Highly qualified teacher
⑧ Special Education

FORMAL COURSE PREPARATION

Please estimate the total number of <u>courses</u> (quarter or semester) you have taken at the undergraduate and/or graduate level in each of the following areas:

		(Number of courses)									
		0	**1-2**	**3-4**	**5-6**	**7-8**	**9-10**	**11-12**	**13-14**	**15-16**	**17+**
FC.1	Refresher mathematics courses (e.g., algebra, geometry	⓪	①	②	③	④	⑤	⑥	⑦	⑧	⑨
FC.2	Advanced mathematics courses (e.g., calculus, statistics)	⓪	①	②	③	④	⑤	⑥	⑦	⑧	⑨
FC.3	Mathematics Education	⓪	①	②	③	④	⑤	⑥	⑦	⑧	⑨
FC.4	Special Education	⓪	①	②	③	④	⑤	⑥	⑦	⑧	⑨

This is the end of the Instructional Practices portion of the survey. Please continue on to complete the Instructional Content portion. Thank you.

Wisconsin Center for Education Research
Council of Chief State School Officers

SURVEYS OF ENACTED CURRICULUM©

Survey Of Instructional Content
Teacher Survey
Grades K-12
Mathematics

The following pages request information regarding topic coverage and your expectations for students in the target mathematics class **for the most recent school year (current year if reporting after March 1st).** The content matrix that follows contains lists of discrete topics associated with mathematics instruction. The categories and the level of specificity are intended to gather information about content across a wide variety of programs. It is not intended to reflect any recommended or prescribed content for the grade level and may or may not be reflective of your local curriculum.

Please read the instructions on the next two pages carefully before proceeding.

Step 1: Indicate topics not covered in this class

Begin by reviewing the entire list of topics identified in the topics column of each table, noting how topics are grouped. After reviewing each topic within a given grouping, if none of the topics listed within that group receive any instructional coverage, circle the "<None>" in the "Time on Topic" column for that group. For any individual topic that is not covered in this mathematics class, fill in the circled "zero" in the "Time on Topic" column. (Not necessary for those groups with "<None>" circled.) Any topics or topic groups so identified will not require further response. [Note, for example, that the class described in the example below did not cover any topics under "Instructional Technology" and so "<None>" is circled.]

Step 2: Indicate the amount of time spent on each topic covered in this class

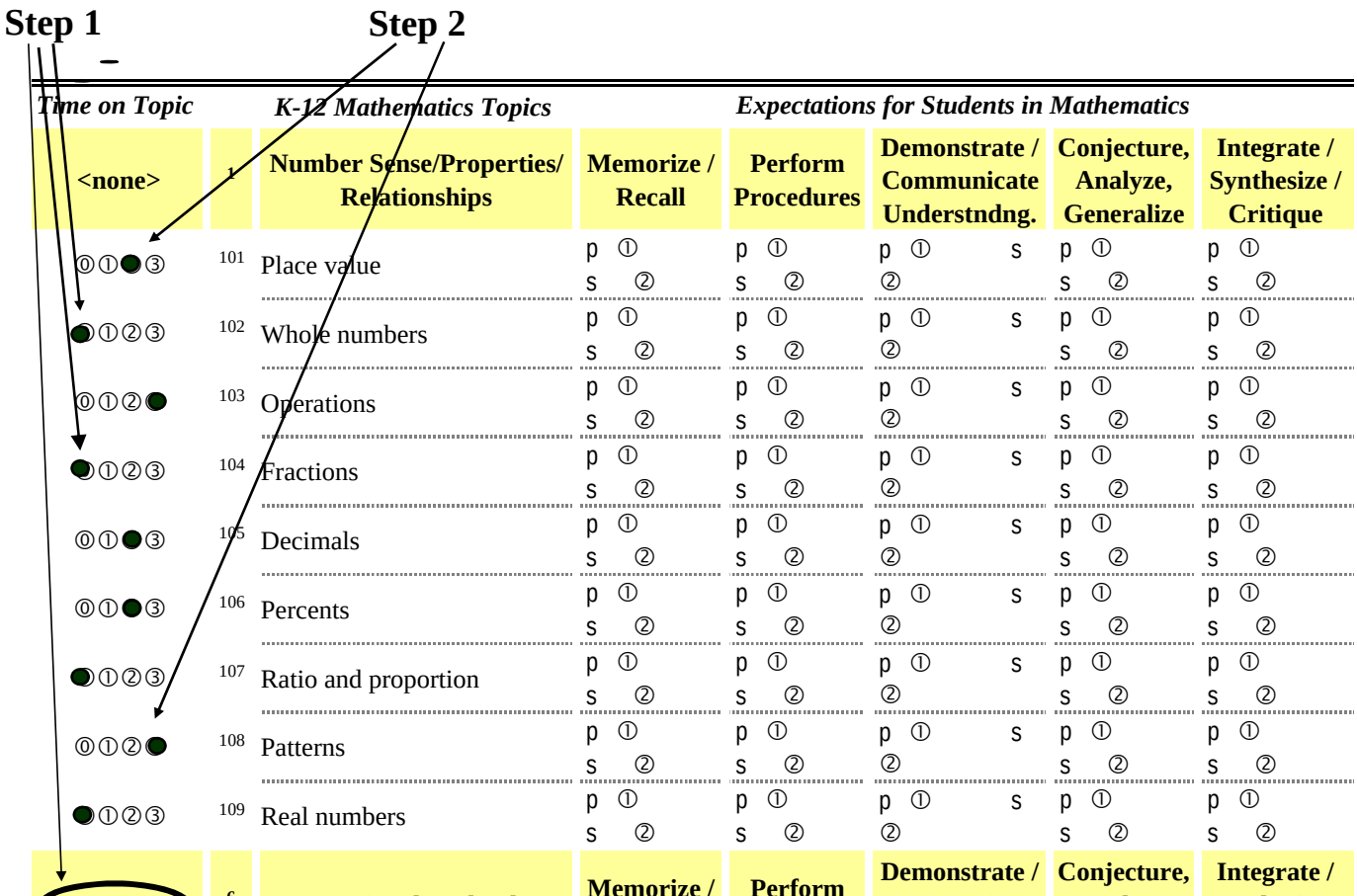
Examine the list of topics a second time. This time note the amount of coverage devoted to each topic by filling in the appropriately numbered circle in the "Time on Topic" column based upon the following codes:

0 = None, not covered

1 = Slight Coverage (less than one class/lesson)

2 = Moderate Coverage (one to five classes/lessons)

3 = Sustained Coverage (more than five classes/lessons)



Time on Topic		*K-12 Mathematics Topics*	*Expectations for Students in Mathematics*				
<none>	**1**	**Number Sense/Properties/ Relationships**	**Memorize / Recall**	**Perform Procedures**	**Demonstrate / Communicate Understndng.**	**Conjecture, Analyze, Generalize**	**Integrate / Synthesize / Critique**
0①●③	101	Place value	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
●①②③	102	Whole numbers	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
0①②●	103	Operations	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
●①②③	104	Fractions	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
0①●③	105	Decimals	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
0①●③	106	Percents	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
●①②③	107	Ratio and proportion	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
0①②●	108	Patterns	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
●①②③	109	Real numbers	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
<none>	**6**	**Instructional Technology**	**Memorize / Recall**	**Perform Procedures**	**Demonstrate / Communicate Understndng.**	**Conjecture, Analyze, Generalize**	**Integrate / Synthesize / Critique**
0①②③	601	Use of calculators	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
0①②③	602	Graphing calculators	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
0①②③	603	Computers and internet	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②

Step 3: Indicate the primary and supporting performance expectations for every topic taught

The final step in completing this section of the survey concerns your expectations for what students should be able to do. For each topic listed, please indicate the performance expectations that you consider to be the primary goal of your instruction on that topic, as well as the performance expectation that most supports or helps to scaffold the primary performance expectation.

Primary The performance expectation that represents the primary performance goal for instruction on this topic at this grade level for this class of students.

Supporting The performance expectation that mosts supports (provides scaffolding) for achieving the goal indicated by the primary performance expectation

Step 3

Time on Topic		*K-12 Mathematics Topics*	*Expectations for Students in Mathematics*				
<none>	**1**	**Number Sense/Properties/ Relationships**	**Memorize / Recall**	**Perform Procedures**	**Demonstrate / Communicate Understndng.**	**Conjecture, Analyze, Generalize**	**Integrate / Synthesize / Critique**
⓪①●③	101	Place value	p ① / s ●	p ① / s ②	p ● / s ②	p ① / s ②	p ① / s ②
●①②③	102	Whole numbers	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②
⓪①②●	103	Operations	p ① / s ②	p ① / s ●	p ● / s ②	p ① / s ②	p ① / s ②
●①②③	104	Fractions	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②
⓪①●③	105	Decimals	p ① / s ②	p ① / s ●	p ● / s ②	p ① / s ②	p ① / s ②
⓪①●③	106	Percents	p ① / s ②	p ① / s ●	p ● / s ②	p ① / s ②	p ① / s ②
●①②③	107	Ratio and proportion	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②
⓪①②●	108	Patterns	p ① / s ②	p ① / s ②	p ● / s ②	p ① / s ●	p ① / s ②
●①②③	109	Real numbers	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②
<none>	**6**	**Instructional Technology**	**Memorize / Recall**	**Perform Procedures**	**Demonstrate / Communicate Understndng.**	**Conjecture, Analyze, Generalize**	**Integrate / Synthesize / Critique**
⓪①②③	601	Use of calculators	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②
⓪①②③	602	Graphing calculators	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②
⓪①②③	603	Computers and internet	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②	p ① / s ②

Expectations for Students in Mathematics

Memorize / Recall

Recite basic mathematics facts

Recall mathematics terms and definitions

Recall formulas and computational procedures

Perform Procedures

Use numbers to count, order, or denote

Do computational procedures or algorithms

Follow procedures or instructions

Solve equations, formula, and routine word problems

Organize or display data

Read or produce graphs and tables

Execute geometric constructions

Conjecture/Analyze/Generalize

Determine the truth of a mathematical pattern or proposition

Write formal or informal proofs

Recognize, generate, or create patterns

Find a mathematical rule to generate a pattern or number sequence

Make and investigate mathematical conjectures

Identify faulty arguments or misrepresentations of data

Reason inductively or deductively

Demonstrate / Communicate Understanding

Communicate mathematical ideas

Use representations to model mathematical ideas

Explain findings and results from data analysis strategies

Develop and explain relationships between concepts

Show or explain relationships between models, diagrams, and/or other representations

Integrate, Synthesize Critique

Apply and adapt a variety of appropriate strategies to solve non-routine problems

Apply mathematics in contexts outside of mathematics

Apply to real world situations

Synthesize content and ideas from several sources

Response Codes

Time on Topic

0 = None
(Not covered)

1 = Slight coverage
(Less than one class/lesson)

2 = Moderate coverage
(One to five classes/lessons)

3 = Sustained coverage
(More than five classes/lessons)

Response Codes

Expectations for Students

0 = No emphasis
(Not a performance goal for this topic)

1 = Slight emphasis
(Less than 25% of time on this topic)

2 = Moderate emphasis
(25% to 33% of time on this topic)

3 = Sustained emphasis
(More than 33% of time on this topic)

Time on Topic		*Grades K-12 Mathematics Topics*	*Expectations for Students in Mathematics*				
<none>	1	**Number Sense/Properties/Relationships**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	101	Place value	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	102	Whole numbers and integers	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	103	Operations	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	104	Fractions	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	105	Decimals	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	106	Percents	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	107	Ratios and proportions	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	108	Patterns	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	109	Real and/or rational numbers	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	110	Exponents and scientific notation	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	111	Factors, multiples, and divisibility	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	112	Odd/even/prime/composite/square numbers	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	113	Estimation	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	114	Number comparisons (e.g., order, magnitude, relative size, inverse, opposites, equivalent	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	115	Order of operations	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	116	Computational algorithms	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	117	Relationships between operations	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	118	Number theory (e.g., base-ten and non-base-ten systems)	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
⓪ ① ② ③	119	Mathematical properties (e.g., distr. property)	p ① s ②	p ① s ②	p ① s ②	p ① s ②	p ① s ②
<none>	2	**Operations**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	201	Add/subtract whole numbers and integers	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	202	Multiply whole numbers and integers	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	203	Divide whole numbers and integers	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	204	Combinations of operations on whole numbers or integers	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	205	Equivalent and non-equivalent fractions	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	206	Add/subtract fractions	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	207	Multiply fractions	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	208	Divide fractions	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	209	Combinations of operations on fractions	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	210	Ratio and proportion	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	211	Representations of fractions	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤

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Time on Topic		*Grades K-12 Mathematics Topics*	*Expectations for Students in Mathematics*				
<none>	1	**Operations (cont.)**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	212	Equivalence of decimals, fractions, and percents	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	213	Add/subtract decimals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	214	Multiply decimals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	215	Divide decimals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	216	Combinations of operations on decimals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	217	Computing with percents	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	218	Computing with exponents and radicals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	3	**Measurement**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	301	Use of measuring instruments	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	302	Theory (e.g., arbitrary, standard units, and unit size)	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	303	Conversions	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	304	Metric (SI) system	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	305	Length and perimeter	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	306	Area and volume	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	307	Surface area	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	308	Direction, location, and navigation	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	309	Angles	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	310	Circles (e.g., *pi* , radius, and area)	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	311	Mass (weight)	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	312	Time and temperature	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	313	Money	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	314	Derived measures (e.g., rate and speed)	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	315	Calendar	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	316	Accuracy and precision	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	4	**Consumer Applications**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	401	Simple interest	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	402	Compound interest	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	403	Rates (e.g., discount and commission)	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	404	Spreadsheets	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤

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<none>	5	**Basic Algebra**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	501	Absolute value	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	502	Use of variables	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	503	Evaluation of formulas, expressions, and equations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	504	One-step equations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	505	Coordinate planes	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	506	Patterns	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	507	Multi-step equations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	508	Inequalities	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	509	Linear and non-linear relations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	510	Rate of change/slope/line	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	511	Operations on polynomials	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	512	Factoring	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	513	Square roots and radicals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	514	Operations on radicals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	515	Rational expressions	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	516	Multiple representations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	6	**Advanced Algebra**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	601	Quadratic equations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	602	Systems of equations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	603	Systems of inequalities	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	604	Compound inequalities	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	605	Matrices and determinants	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	606	Conic sections	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	607	Rational, negative exponents, or radicals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	608	Rules for exponents	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	609	Complex numbers	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	610	Binomial theorem	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	611	Factor/remainder theorem	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	612	Field properties of real number system	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	613	Multiple representations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤

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<none>	7	**Geometric Concepts**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	701	Basic terminology	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	702	Points, lines, rays, segments, and vectors	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	703	Patterns	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	704	Congruence	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	705	Similarity	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	706	Parallels	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	707	Triangles	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	708	Quadrilaterals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	709	Circles	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	710	Angles	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	711	Polygons	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	712	Polyhedra	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	713	Models	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	714	3-D Relationships	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	715	Symmetry	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	716	Transformations (e.g., flips or turns)	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	717	Pythagorean Theorem	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	8	**Advanced Geometry**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	801	Logic, reasoning, and proofs	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	802	Loci	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	803	Spheres, cones, and cylinders	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	804	Coordinate Geometry	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	805	Vectors	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	806	Analytic Geometry	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	807	Non-Euclidean Geometry	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	808	Topology	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤

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<none>	9	**Data Displays**	Memorize/ Recall	Perform Procedures	Demonstrate/ Communicate Understndg.	Conjecture / Analyze / Generalize	Integrate / Synthesize / Critique
⓪ ① ② ③	901	Summarize data in a table or graph	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	902	Bar graphs and histograms	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	903	Pie charts and circle graphs	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	904	Pictographs	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	905	Line graphs	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	906	Stem and leaf plots	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	907	Scatter plots	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	908	Box plots	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	909	Line plots	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	910	Classification and Venn diagrams	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	911	Tree diagrams	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	10	**Statistics**	Memorize/ Recall	Perform Procedures	Demonstrate/ Communicate Understndg.	Conjecture / Analyze / Generalize	Integrate / Synthesize / Critique
⓪ ① ② ③	1001	Mean, median, and mode	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1002	Variability, standard deviation, and range	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1003	Line of best fit	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1004	Quartiles and percentiles	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1005	Bivariate distribution	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1006	Confidence intervals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1007	Correlation	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1008	Hypothesis testing	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1009	Chi-square	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1010	Data transformation	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1011	Central Limit Theorem	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	11	**Probability**	Memorize/ Recall	Perform Procedures	Demonstrate/ Communicate Understndg.	Conjecture / Analyze / Generalize	Integrate / Synthesize / Critique
⓪ ① ② ③	1101	Simple probability	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1102	Compound probability	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1103	Conditional probability	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1104	Empirical probability	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1105	Sampling and sample spaces	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1106	Independent vs. dependent events	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1107	Expected value	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1108	Binomial distribution	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1109	Normal curve	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤

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<none>	12	**Analysis**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	1201	Sequences and series	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1202	Limits	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1203	Continuity	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1204	Rates of change	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1205	Maxima, minima, and range	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1206	Differentiation	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1207	Integration	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	13	**Trigonometry**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	1301	Basic ratios	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1302	Radian measure	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1303	Right-triangle trigonometry	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1304	Law of Sines and Cosines	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1305	Identities	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1306	Trigonometric equations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1307	Polar coordinates	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1308	Periodicity	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1309	Amplitude	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	14	**Special Topics**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	1401	Sets	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1402	Logic	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1403	Mathematical induction	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1404	Linear programming	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1405	Networks	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1406	Iteration and recursion	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1407	Permutation combinations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1408	Simulations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1409	Fractals	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤

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<none>	15	**Functions**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	1501	Notation	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1502	Relations	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1503	Linear	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1504	Quadratic	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1505	Polynomial	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1506	Rational	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1507	Logarithmic	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1508	Exponential	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1509	Trigonometric and circular	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1510	Inverse	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1511	Composition	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
<none>	16	**Instructional Technology**	**Memorize/ Recall**	**Perform Procedures**	**Demonstrate/ Communicate Understndg.**	**Conjecture / Analyze / Generalize**	**Integrate / Synthesize / Critique**
⓪ ① ② ③	1601	Use of calculators	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1602	Use of graphing calculators	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1603	Use of computers and the internet	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1604	Computer programming	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤
⓪ ① ② ③	1605	Use of spreadsheets	p ① s ①	p ② s ②	p ③ s ③	p ④ s ④	p ⑤ s ⑤

Thank you for your participation in this survey.

The following information is collected as part of the registration process

Name: _____
(Note: Your personal information will be kept confidential.)

Email address: _____
(required for on-line access to individual results)

District: _____

School: _____

Position: _____

Providing your name and email address will allow you to gain access to your individual results along with results for your school and/or district.