**IEA Third International Mathematics and Science Study - Repeat**

# Mathematics Teacher Questionnaire
# Main Survey

Your school has agreed to participate in the Third International Mathematics and Science Study - Repeat (TIMSS-R), an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS-R is investigating mathematics and science achievement in about forty countries around the world. It is designed to measure and interpret differences in national education systems in order to help improve the teaching and learning of mathematics and science worldwide.

This questionnaire is addressed to teachers of mathematics, who are asked to supply information about their academic and professional backgrounds, instructional practices, and attitudes towards teaching mathematics. Since your class has been selected as part of a nationwide sample, your responses are very important in helping to describe mathematics classes in <country>.

Some of the questions in this questionnaire ask about **your mathematics class**. This is the class which is identified at the top of this page, and which will be tested as part of TIMSS-R in your school.

It is important that you answer each question carefully so that the information provided reflects your situation as accurately as possible. It is estimated that it will require approximately 60 minutes to complete this questionnaire.

Your cooperation in completing this questionnaire is greatly appreciated.

**GENERAL DIRECTIONS:**

1.  Identify a place and a time when you will be able to complete this questionnaire without being interrupted.  This questionnaire has been designed to be completed within 60 minutes by most teachers.  However, the amount of time you will need may vary.  To make it as easy as possible for you to respond, most items may be completed simply by checking the appropriate box.

2.  There are no "right" or "wrong" answers to any of these items.  The questionnaire is designed to provide information about teachers' professional experiences, opinions, and classroom activities.  **Remember, "your mathematics class" is the class which is identified on the cover of this questionnaire, and which will be tested as part of TIMSS-R in your school.**

3.  More specific instructions to assist you in responding are found in *italics* for each item.  Once you have completed the questionnaire, place it into the return envelope provided and return it to:

<Country Specific Information>

Again, thank you for your time, effort, and thought in completing this questionnaire!

# THERE ARE NO QUESTIONS ON THIS PAGE

# Section A

**1.    How old are you?**

*Check **one** box only.*

under 25 ................................................................................................  ☐

25-29 ....................................................................................................  ☐

30-39 ....................................................................................................  ☐

40-49 ....................................................................................................  ☐

50-59 ....................................................................................................  ☐

60 or more .............................................................................................  ☐

**2.    Are you female or male?**

*Check **one** box only.*

female ...................................................................................................  ☐

male ......................................................................................................  ☐

**3.    By the end of this school year, how many years will you have been teaching altogether?**

*Please **round** to the nearest whole number. .................................................*    _____

**4.** **In one typical calendar week from Monday to Sunday, for how many single \<hours/periods\> are you formally \<scheduled/time-tabled\> in one school week altogether?**

*Write in number* ........................................................................ _____ *\<hours/periods\>*

**5.** **In one typical calendar week from Monday to Sunday, for how many single \<hours/periods\> are you formally \<scheduled/time-tabled\> to teach each of the following subjects?**

NRC Note:    \<List only the generic science courses appropriate for your country.\>

*Count a double \<hour/period\> as two single \<hours/periods\>.*
*Write zero if none.*

*Number of*
*single \<hours/periods\>*

a)    mathematics ................................................................................  _____

b)    \<GENERAL/INTEGRATED SCIENCE\> ........................................  _____

c)    \<PHYSICAL SCIENCE\> ...............................................................  _____

d)    \<EARTH SCIENCE\> .....................................................................  _____

e)    \<LIFE SCIENCE\> .........................................................................  _____

f)    \<BIOLOGY\> .................................................................................  _____

g)    \<CHEMISTRY\> .............................................................................  _____

h)    \<PHYSICS\> ..................................................................................  _____

i)    other subjects ..............................................................................  _____

**6.** **In one typical calendar week from Monday to Sunday, for how many single \<hours/periods\> are you formally \<scheduled/time-tabled\> to perform each of the following tasks?**

*Count a double \<hour/period\> as two single \<hours/periods\>.*
*Write zero if none.*

*Number of*
*single \<hours/periods\>*

a)    student supervision (other than teaching) ........................................  _____

b)    student counselling/appraisal ............................................................  _____

c)    administrative duties .........................................................................  _____

d)    individual curriculum planning .........................................................  _____

e)    cooperative curriculum planning ......................................................  _____

f)    other non-student contact time (i.e., use not specified) ....................  _____

g)    other ...............................................................................................  _____

**7.** **APPROXIMATELY how many hours per week do you normally spend on each of the following activities outside the formal school day? Do not include time already accounted for in Question # 6.**

*Check **one** box in each row.*

| | | *None* | *Less than 1 hour* | *1 - 2 hours* | *3 - 4 hours* | *More than 4 hours* |
|---|---|---|---|---|---|---|
| a) | preparing or grading student tests or exams ......... | ☐ | ☐ | ☐ | ☐ | ☐ |
| b) | reading and grading other student work ............... | ☐ | ☐ | ☐ | ☐ | ☐ |
| c) | planning lessons by yourself................................. | ☐ | ☐ | ☐ | ☐ | ☐ |
| d) | meeting with students outside of classroom time (e.g., tutoring, guidance) ....................................... | ☐ | ☐ | ☐ | ☐ | ☐ |
| e) | meeting with parents ............................................. | ☐ | ☐ | ☐ | ☐ | ☐ |
| f) | professional reading and development activity (e.g., seminars, conferences, etc.) ........................ | ☐ | ☐ | ☐ | ☐ | ☐ |
| g) | keeping students' records up to date ..................... | ☐ | ☐ | ☐ | ☐ | ☐ |
| h) | administrative tasks including staff meetings (e.g. photocopying, displaying students' work).... | ☐ | ☐ | ☐ | ☐ | ☐ |
| i) | other ...................................................................... | ☐ | ☐ | ☐ | ☐ | ☐ |

**8.** **APPROXIMATELY how many hours per week do you normally spend on your teaching activities altogether (include time spent in and out of school)?**

*Please **round** to the nearest whole hour. ....................................................* _____

**9.** **About how often do you have meetings with other teachers in your subject area to discuss and plan curriculum or teaching approaches?**

*Check **one** box only.*

| | |
|---|---|
| never .................................................................................... | ☐ |
| once or twice a year ............................................................. | ☐ |
| every other month ................................................................ | ☐ |
| once a month ........................................................................ | ☐ |
| once a week .......................................................................... | ☐ |
| two or three times a week .................................................... | ☐ |
| almost every day .................................................................. | ☐ |

**10.** **How much influence do you have on each of the following...**

*Check **one** box in each row.*

| | | None | Little | Some | A lot |
|---|---|:---:|:---:|:---:|:---:|
| a) | subject matter to be taught .................................. | ☐ | ☐ | ☐ | ☐ |
| b) | specific textbooks to be used .............................. | ☐ | ☐ | ☐ | ☐ |
| c) | the amount of money to be spent on supplies ...... | ☐ | ☐ | ☐ | ☐ |
| d) | what supplies are purchased................................. | ☐ | ☐ | ☐ | ☐ |

**11.** **To be good at mathematics at school, how important do you think it is for students to...**

*Check **one** box in each row.*

| | | Not important | Somewhat important | Very important |
|---|---|:---:|:---:|:---:|
| a) | remember formulas and procedures................................ | ☐ | ☐ | ☐ |
| b) | think in a sequential and procedural manner ................... | ☐ | ☐ | ☐ |
| c) | understand mathematical concepts, principles, and strategies ................................................................. | ☐ | ☐ | ☐ |
| d) | be able to think creatively .............................................. | ☐ | ☐ | ☐ |
| e) | understand how mathematics is used in the real world .. | ☐ | ☐ | ☐ |
| f) | be able to provide reasons to support their solutions ...... | ☐ | ☐ | ☐ |

**12. To what extent do you agree or disagree with each of the following statements?**

*Check **one** box in each row.*

| | | *Strongly disagree* | *Disagree* | *Agree* | *Strongly agree* |
|---|---|---|---|---|---|
| a) | Mathematics is primarily an abstract subject. ...... | ☐ | ☐ | ☐ | ☐ |
| b) | Mathematics is primarily a formal way of representing the real world. ................................ | ☐ | ☐ | ☐ | ☐ |
| c) | Mathematics is primarily a practical and structured guide for addressing real situations. .................... | ☐ | ☐ | ☐ | ☐ |
| d) | If students are having difficulty, an effective approach is to give them more practice by themselves during the class. ................................ | ☐ | ☐ | ☐ | ☐ |
| e) | Some students have a natural talent for mathematics and others do not. .......................... | ☐ | ☐ | ☐ | ☐ |
| f) | More than one representation (picture, concrete material, symbol set, etc.) should be used in teaching a mathematics topic. ............................ | ☐ | ☐ | ☐ | ☐ |
| g) | Mathematics should be learned as sets of algorithms or rules that cover all possibilities. .... | ☐ | ☐ | ☐ | ☐ |
| h) | Basic computational skills on the part of the teacher are sufficient for teaching <PRIMARY SCHOOL> mathematics. ............... | ☐ | ☐ | ☐ | ☐ |
| i) | A liking for and understanding of students are essential for teaching mathematics. ..................... | ☐ | ☐ | ☐ | ☐ |

**13. Indicate your familiarity with each of the following documents:**

NRC Note:   <Include country-specific appropriate options only.>

*Check **one** box in each row.*

| | No such document | Not familiar | Fairly familiar | Very familiar |
|---|---|---|---|---|
| a) <THE NATIONAL CURRICULUM GUIDE FOR MATHEMATICS> ................................ | ☐ | ☐ | ☐ | ☐ |
| b) <THE REGIONAL CURRICULUM GUIDE(S) FOR MATHEMATICS> ................................ | ☐ | ☐ | ☐ | ☐ |
| c) <THE SCHOOL CURRICULUM GUIDE> ....... | ☐ | ☐ | ☐ | ☐ |
| d) <THE NATIONAL EXAMINATION SPECIFICATIONS> ........................................ | ☐ | ☐ | ☐ | ☐ |
| e) <THE REGIONAL EXAMINATION SPECIFICATIONS> ........................................ | ☐ | ☐ | ☐ | ☐ |
| f) <THE NATIONAL PEDAGOGY GUIDE FOR MATHEMATICS> ................................ | ☐ | ☐ | ☐ | ☐ |
| g) <THE REGIONAL PEDAGOGY GUIDE FOR MATHEMATICS> ................................ | ☐ | ☐ | ☐ | ☐ |

**14. How well prepared do you feel you are to teach…**

*Check **one** box in each row.*

| | I do not teach these topics | Not well prepared | Somewhat prepared | Very well prepared |
|---|---|---|---|---|
| a) fractions, decimals and percentages? ................... | ☐ | ☐ | ☐ | ☐ |
| b) ratios and proportions? ........................................ | ☐ | ☐ | ☐ | ☐ |
| c) measurement – units, instruments, and accuracy? ........................................................ | ☐ | ☐ | ☐ | ☐ |
| d) perimeter, area, and volume? ............................. | ☐ | ☐ | ☐ | ☐ |
| e) geometric figures – definitions and properties? ... | ☐ | ☐ | ☐ | ☐ |
| f) geometric figures – symmetry, motions and transformations, congruence and similarity? | ☐ | ☐ | ☐ | ☐ |
| g) coordinate geometry? ........................................ | ☐ | ☐ | ☐ | ☐ |
| h) algebraic representation? .................................... | ☐ | ☐ | ☐ | ☐ |
| i) evaluate and perform operations on algebraic expressions? ..................................... | ☐ | ☐ | ☐ | ☐ |
| j) solving linear equations and inequalities? ........... | ☐ | ☐ | ☐ | ☐ |
| k) representation and interpretation of data in graphs, charts, and tables? ............................. | ☐ | ☐ | ☐ | ☐ |
| l) simple probabilities – understanding and calculations? ................................................ | ☐ | ☐ | ☐ | ☐ |

**15.** **What is the highest level of formal education you have completed?**

*Check **one** box only.*

<DID NOT COMPLETE SECONDARY SCHOOL> ............................... ☐

<SECONDARY ONLY> ................................................................ ☐

<BA OR EQUIVALENT> ............................................................. ☐

<MA/PHD> ............................................................................... ☐

**16a.** **Do you have a <teacher training certificate>?**

*Check **one** box only.* .................................................... **Yes** ☐   **No** ☐

**16b.** **How many years of <pre-service teacher training> have you had?**

*Please round to the nearest whole number.* ................................................ _____
*(Write in 0 (zero), if you have not had any teacher training.)*

**16c.** **If you have had <pre-service teacher training>, did you begin this training in secondary school?**

*Check **one** box only.* .................................................... **Yes** ☐   **No** ☐

**17.** **While studying to obtain your <BA or equivalent or teacher training certificate>, what was your major or main area of study?**

I do not have a <BA or equivalent or teacher training certificate.> ...............  ☐
*(Check the box and skip to the next question.)*

*Check **one** box in each row.*

|  |  | *Yes* | *No* |
|---|---|:---:|:---:|
| a) | Mathematics ....................................................................... | ☐ | ☐ |
| b) | Biology .............................................................................. | ☐ | ☐ |
| c) | Physics .............................................................................. | ☐ | ☐ |
| d) | Chemistry .......................................................................... | ☐ | ☐ |
| e) | Education ........................................................................... | ☐ | ☐ |
| f) | Mathematics Education ...................................................... | ☐ | ☐ |
| g) | Science Education .............................................................. | ☐ | ☐ |
| h) | Other ................................................................................. | ☐ | ☐ |

**18.** **If you have a master's degree, what was your major or main area of study?**

I do not have a master's degree. ......................................................  ☐
*(Check the box and skip to the next question.)*

*Check **one** box in each row.*

|  |  | *Yes* | *No* |
|---|---|:---:|:---:|
| a) | Mathematics ....................................................................... | ☐ | ☐ |
| b) | Biology .............................................................................. | ☐ | ☐ |
| c) | Physics .............................................................................. | ☐ | ☐ |
| d) | Chemistry .......................................................................... | ☐ | ☐ |
| e) | Education ........................................................................... | ☐ | ☐ |
| f) | Mathematics Education ...................................................... | ☐ | ☐ |
| g) | Science Education .............................................................. | ☐ | ☐ |
| h) | Other ................................................................................. | ☐ | ☐ |

# International Option

**19.** **Was teaching your first choice as a career when beginning university or teacher education college?**

*Check only **one** box.* ................................................................. *Yes* ☐　　*No* ☐

**20.** **Would you change to another career if you had the opportunity?**

*Check only **one** box.* ................................................................. *Yes* ☐　　*No* ☐

**21.** **Do you think that society appreciates your work?**

*Check only **one** box* ................................................................. *Yes* ☐　　*No* ☐

**22.** **Do you think your students appreciate your work?**

*Check only **one** box.* ................................................................. *Yes* ☐　　*No* ☐

**23.** **Approximately how many books are in your home?**

*(Do not count magazines or newspapers.)*

*Check **one** box only.*

none or very few (0-10) ................................................................. ☐

enough to fill a shelf (11-25) ....................................................... ☐

enough to fill a bookcase (26-100) ............................................. ☐

enough to fill two bookcases (101-200) ...................................... ☐

enough to fill three or more bookcases (more than 200) ............. ☐

**THERE ARE NO QUESTIONS ON THIS PAGE**

# Section B

In this section, many of the questions refer to **your mathematics class**. Please remember that this is the class which is identified on the cover of this questionnaire, and which will be tested as part of TIMSS-R in your school.

**1.      How many students are in your mathematics class?**

*Write in a number for each.  Write 0 (zero) if there are none.*

boys _____      girls _____

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**2.      What subject matter do you emphasize <u>most</u> in your mathematics class?**

*Check **one** box only.*

mainly number (e.g., whole numbers,
fractions, decimals, percentages, etc.) ...................................................  ☐

geometry ..........................................................................................  ☐

algebra ..............................................................................................  ☐

combined algebra and geometry ...........................................................  ☐

combined algebra, geometry, number, etc. .............................................  ☐

other, please specify _____ .............................  ☐

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**3.      How many minutes per week do you teach mathematics to your mathematics class?**

Minutes: _____

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**4a.     Do you use a textbook in teaching mathematics to your class?**

*Check **one** box.*

*Yes* ☐        *No* ☐

**4b.     If yes, approximately what percentage of your weekly mathematics teaching time is based on your mathematics textbook?**

*Check **one** box.*

0-25% ...............................................................................................  ☐

26-50% ..............................................................................................  ☐

51-75% ..............................................................................................  ☐

76-100% ............................................................................................  ☐

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**5.** **Do the students in your mathematics class have calculators available to use during mathematics lessons?**

*Check **one** box only.*

*Yes* ☐      *No* ☐

---

**6.** **To what extent are the students in your mathematics class permitted to use calculators during mathematics lessons?**

*Check **one** box only.*

unrestricted use ........................................................................................ ☐

restricted use ........................................................................................... ☐

calculators are not permitted .................................................................... ☐

---

**7.** **How often do students in your mathematics class use calculators for the following activities?**

*Check **one** box in each row.*

| | | Almost every class | Once or twice a week | Once or twice a month | Never, or hardly ever |
|---|---|:---:|:---:|:---:|:---:|
| a) | Checking answers | ☐ | ☐ | ☐ | ☐ |
| b) | Tests and exams | ☐ | ☐ | ☐ | ☐ |
| c) | Routine computation | ☐ | ☐ | ☐ | ☐ |
| d) | Solving complex problems | ☐ | ☐ | ☐ | ☐ |
| e) | Exploring number concepts | ☐ | ☐ | ☐ | ☐ |

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**8.** **Do the students in your mathematics class have computers available to use during mathematics lessons?**

*Check **one** box in each row.*

| | | Never or almost never | Some lessons | Most lessons | Every lesson |
|---|---|:---:|:---:|:---:|:---:|
| a) | in the classroom | ☐ | ☐ | ☐ | ☐ |
| b) | in other instructional rooms (computer labs, science lab, reading lab, library, etc.) | ☐ | ☐ | ☐ | ☐ |

**If computers are available,**

| | | Yes | No |
|---|---|:---:|:---:|
| c) | do any of the computers have access to the Internet? | ☐ | ☐ |
| d) | do you use the Internet for instructional/educational purposes? | ☐ | ☐ |

**9.** **In planning mathematics lessons, what is your main source of written information when...**

NRC Note:   <List only country-specific appropriate options.>

*Check **one** box in each row.*

| | <National or Regional Examination Specifications> | <National or Regional Curriculum Guide> | <School Curriculum Guide> | Teacher Edition of Textbook | Student Edition of Textbook | Other Resource Books |
|---|---|---|---|---|---|---|
| a) deciding which topics to teach (goals) ............. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b) deciding how to present a topic ........................ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c) selecting problems and exercises for work in class and homework ........................... | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d) selecting problems and applications for assessment and evaluation ................................ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

**10.** **In your mathematics lessons, how often do you usually ask students to do the following?**

*Check **one** box in each row.*

| | Never or almost never | Some lessons | Most lessons | Every lesson |
|---|---|---|---|---|
| a) explain the reasoning behind an idea ................... | ☐ | ☐ | ☐ | ☐ |
| b) represent and analyze relationships using tables, charts, or graphs ........................................ | ☐ | ☐ | ☐ | ☐ |
| c) work on problems for which there is no immediately obvious method of solution ............ | ☐ | ☐ | ☐ | ☐ |
| d) use computers to solve exercises or problems ..... | ☐ | ☐ | ☐ | ☐ |
| e) write equations to represent relationships ............ | ☐ | ☐ | ☐ | ☐ |
| f) practice computational skills................................ | ☐ | ☐ | ☐ | ☐ |
| g) use graphing calculators to solve exercises or problems ......................................................... | ☐ | ☐ | ☐ | ☐ |

**11.** **In mathematics lessons, how often do students...**

*Check **one** box in each row.*

| | Never or almost never | Some lessons | Most lessons | Every lesson |
|---|---|---|---|---|
| a) work individually without assistance from the teacher ............................................. | ☐ | ☐ | ☐ | ☐ |
| b) work individually with assistance from the teacher ............................................. | ☐ | ☐ | ☐ | ☐ |
| c) work together as a class with the teacher teaching the whole class ..................................... | ☐ | ☐ | ☐ | ☐ |
| d) work together as a class with students responding to one another ...................................... | ☐ | ☐ | ☐ | ☐ |
| e) work in pairs or small groups without assistance from the teacher ................................ | ☐ | ☐ | ☐ | ☐ |
| f) work in pairs or small groups with assistance from the teacher .................................... | ☐ | ☐ | ☐ | ☐ |

**12.** **In a typical month of lessons for your mathematics class, what percentage of time is spent on each of the following activities?**

*Write in a percentage for each activity*

***The total should add to 100%***

a) adminstrative tasks (not related to lesson's content/purpose) ............. _____%

b) homework review ................................................................. _____%

c) lecture-style presentation by teacher...................................... _____%

d) teacher-guided student practice ............................................ _____%

e) re-teaching and clarification of content/procedures........................... _____%

f) student independent practice................................................ _____%

g) tests and quizzes ............................................................ _____%

h) other ...................................................................... _____%

**13.** **The following list includes the main topics addressed by the TIMSS mathematics test. Check the response that describes when students in your mathematics class have been taught each topic.**

*If a topic has been taught before this year and also in the current year, check the two boxes that apply. Otherwise, check **one** box in each row.*

| | *Taught before this year* | *Taught 1-5 periods this year* | *Taught more than 5 periods this year* | *Not yet taught* | *I do not know* |
|---|---|---|---|---|---|
| **a) Fractions and Number Sense** | | | | | |
| 1) Whole numbers – including place values, factorization and operations (+, −, ×, ÷) | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2) Understanding and representing common fractions | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3) Computations with common fractions | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4) Understanding and representing decimal fractions | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5) Computations with decimal fractions | ☐ | ☐ | ☐ | ☐ | ☐ |
| 6) Relationships between common and decimal fractions, ordering of fractions | ☐ | ☐ | ☐ | ☐ | ☐ |
| 7) Rounding whole numbers and decimal fractions | ☐ | ☐ | ☐ | ☐ | ☐ |
| 8) Estimating the results of computations | ☐ | ☐ | ☐ | ☐ | ☐ |
| 9) Number lines | ☐ | ☐ | ☐ | ☐ | ☐ |
| 10) Computations with percentages and problems involving percentages | ☐ | ☐ | ☐ | ☐ | ☐ |
| 11) Simple computations with negative numbers | ☐ | ☐ | ☐ | ☐ | ☐ |
| 12) Square roots (of perfect squares less than 144), small integer exponents | ☐ | ☐ | ☐ | ☐ | ☐ |
| **b) Measurement** | | | | | |
| 13) Units of measurement; standard metric units | ☐ | ☐ | ☐ | ☐ | ☐ |
| 14) Reading measurement instruments | ☐ | ☐ | ☐ | ☐ | ☐ |
| 15) Estimates of measurement; accuracy of measurement | ☐ | ☐ | ☐ | ☐ | ☐ |
| 16) Perimeter and area of simple shapes – triangle, rectangles, and circles | ☐ | ☐ | ☐ | ☐ | ☐ |
| 17) Perimeter and area of combined shapes | ☐ | ☐ | ☐ | ☐ | ☐ |
| 18) Volume of rectangular solids – i.e., Volume = length × width × height | ☐ | ☐ | ☐ | ☐ | ☐ |

*If a topic has been taught before this year and also in the current year, check the two boxes that apply. Otherwise, check **one** box in each row.*

| | Taught before this year | Taught 1-5 periods this year | Taught more than 5 periods this year | Not yet taught | I do not know |
|---|---|---|---|---|---|
| **c) Geometry** | | | | | |
| 19) Cartesian coordinates of points in a plane ....... | ☐ | ☐ | ☐ | ☐ | ☐ |
| 20) Coordinates of points on a given straight line . | ☐ | ☐ | ☐ | ☐ | ☐ |
| 21) Simple two dimensional geometry – angles on a straight line, parallel lines, triangles and quadrilaterals ............................ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 22) Congruence and similarity ............................... | ☐ | ☐ | ☐ | ☐ | ☐ |
| 23) Symmetry and transformations (reflection and rotation) .................................... | ☐ | ☐ | ☐ | ☐ | ☐ |
| 24) Visualization of three-dimensional shapes ...... | ☐ | ☐ | ☐ | ☐ | ☐ |
| **d) Proportionality** | | | | | |
| 25) Scales applied to maps and models ................. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 26) Concepts of ratio and proportion; ratio and proportion problems .......................... | ☐ | ☐ | ☐ | ☐ | ☐ |
| **e) Algebra** | | | | | |
| 27) Number patterns and simple relations ............. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 28) Simple algebraic expressions .......................... | ☐ | ☐ | ☐ | ☐ | ☐ |
| 29) Representing situations algebraically; formulas ............................................................ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 30) Solving simple equations ................................ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 31) Solving simple inequalities ............................ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **f) Data Representation, Analysis, and Probability** | | | | | |
| 32) Representation and interpretation of data in graphs, charts, and tables ........................... | ☐ | ☐ | ☐ | ☐ | ☐ |
| 33) Arithmetic mean ............................................. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 34) Simple probabilities – understanding and calculations ............................................... | ☐ | ☐ | ☐ | ☐ | ☐ |

**14.** **In your view to what extent do the following limit how you teach your mathematics class?**

*Check **one** box in each row.*

| | | Not at all | A little | Quite a lot | A great deal |
|---|---|---|---|---|---|
| a) | students with different academic abilities ............ | ☐ | ☐ | ☐ | ☐ |
| b) | students who come from a wide range of backgrounds, (e.g., economic, language) ............ | ☐ | ☐ | ☐ | ☐ |
| c) | students with special needs, (e.g., hearing, vision, speech impairment, physical disabilities, mental or emotional/psychological impairment) ............. | ☐ | ☐ | ☐ | ☐ |
| d) | uninterested students .......................................... | ☐ | ☐ | ☐ | ☐ |
| e) | disruptive students ............................................. | ☐ | ☐ | ☐ | ☐ |
| f) | parents interested in their children's learning and progress ............................................................. | ☐ | ☐ | ☐ | ☐ |
| g) | parents uninterested in their children's learning and progress ..................................................... | ☐ | ☐ | ☐ | ☐ |
| h) | shortage of computer hardware ............................ | ☐ | ☐ | ☐ | ☐ |
| i) | shortage of computer software ............................ | ☐ | ☐ | ☐ | ☐ |
| j) | shortage of other instructional equipment for students' use ........................................................ | ☐ | ☐ | ☐ | ☐ |
| k) | shortage of equipment for your use in demonstrations and other exercises ..................... | ☐ | ☐ | ☐ | ☐ |
| l) | inadequate physical facilities ............................... | ☐ | ☐ | ☐ | ☐ |
| m) | high student/teacher ratio .................................... | ☐ | ☐ | ☐ | ☐ |
| n) | low morale among fellow teachers/administrators ........................................ | ☐ | ☐ | ☐ | ☐ |
| o) | low morale among students ................................. | ☐ | ☐ | ☐ | ☐ |
| p) | threat(s) to personal safety or the safety of students ............................................................. | ☐ | ☐ | ☐ | ☐ |

**15.    How often do you usually assign mathematics homework?**

*Check **one** box.*

never .......................................................................................... ☐

less than once a week .................................................................. ☐

once or twice a week ................................................................... ☐

3 or 4 times a week ..................................................................... ☐

every day .................................................................................... ☐

# If "never," please skip ahead to Question 19.

**16.    If you assign mathematics homework, how many minutes of mathematics homework do you usually assign your students?**

*(Consider the time it would take an average student in your class.)*

*Check **one** box.*

less than 15 minutes .................................................................... ☐

15-30 minutes ............................................................................. ☐

31-60 minutes ............................................................................. ☐

61-90 minutes ............................................................................. ☐

more than 90 minutes .................................................................. ☐

**17. If you assign mathematics homework, how often do you assign each of the following kinds of tasks?**

*Check **one** box in each row.*

| | | *Never* | *Rarely* | *Sometimes* | *Always* |
|---|---|---|---|---|---|
| a) | worksheets or workbook ...................................... | ☐ | ☐ | ☐ | ☐ |
| b) | problem/question sets in textbook ....................... | ☐ | ☐ | ☐ | ☐ |
| c) | reading in a textbook or supplementary materials ................................................................ | ☐ | ☐ | ☐ | ☐ |
| d) | writing definitions or other short writing assignment ........................................................... | ☐ | ☐ | ☐ | ☐ |
| e) | small investigation(s) or gathering data ............... | ☐ | ☐ | ☐ | ☐ |
| f) | working individually on long term projects or experiments ........................................ | ☐ | ☐ | ☐ | ☐ |
| g) | working as a small group on long term projects or experiments ........................................ | ☐ | ☐ | ☐ | ☐ |
| h) | finding one or more uses of the content covered ................................................................. | ☐ | ☐ | ☐ | ☐ |
| i) | preparing oral reports either individually or as a small group ............................................... | ☐ | ☐ | ☐ | ☐ |
| j) | keeping a journal ................................................. | ☐ | ☐ | ☐ | ☐ |

**18. If students are assigned <u>written</u> mathematics homework, how often do you do the following?**

I do not assign written homework. ............................................................. ☐
*(Check the box and skip to the next question.)*

*Check **one** box in each row.*

|  | | *Never* | *Rarely* | *Sometimes* | *Always* |
|---|---|---|---|---|---|
| a) | record whether or not the homework was completed | ☐ | ☐ | ☐ | ☐ |
| b) | collect, correct and keep assignments | ☐ | ☐ | ☐ | ☐ |
| c) | collect, correct assignments and then return to students | ☐ | ☐ | ☐ | ☐ |
| d) | give feedback on homework to whole class | ☐ | ☐ | ☐ | ☐ |
| e) | have students correct their own assignments in class | ☐ | ☐ | ☐ | ☐ |
| f) | have students exchange assignments and correct them in class | ☐ | ☐ | ☐ | ☐ |
| g) | use it as a basis for class discussion | ☐ | ☐ | ☐ | ☐ |
| h) | use it to contribute towards students' grades or marks | ☐ | ☐ | ☐ | ☐ |

**19. In assessing the work of the students in your mathematics class, how much weight do you give each of the following types of assessment?**

*Check **one** box in each row.*

|  | | *None* | *Little* | *Quite a lot* | *A great deal* |
|---|---|---|---|---|---|
| a) | standardized tests produced outside the school | ☐ | ☐ | ☐ | ☐ |
| b) | teacher-made short answer or essay tests that require students to describe or explain their reasoning | ☐ | ☐ | ☐ | ☐ |
| c) | teacher made multiple choice, true-false and matching tests | ☐ | ☐ | ☐ | ☐ |
| d) | how well students do on homework assignments | ☐ | ☐ | ☐ | ☐ |
| e) | how well students do on projects or practical/laboratory exercises | ☐ | ☐ | ☐ | ☐ |
| f) | observations of students | ☐ | ☐ | ☐ | ☐ |
| g) | responses of students in class | ☐ | ☐ | ☐ | ☐ |

**20.** **How often do you use the assessment information you gather from students to...**

*Check **one** box in each row.*

| | | None | Little | Quite a lot | A great deal |
|---|---|---|---|---|---|
| a) | provide students' grades or marks? ...................... | ☐ | ☐ | ☐ | ☐ |
| b) | provide feedback to students? ............................. | ☐ | ☐ | ☐ | ☐ |
| c) | diagnose students' learning problems? ................. | ☐ | ☐ | ☐ | ☐ |
| d) | report to parents? ................................................. | ☐ | ☐ | ☐ | ☐ |
| e) | assign students to different programs or tracks? ............................................................. | ☐ | ☐ | ☐ | ☐ |
| f) | plan for future lessons? ....................................... | ☐ | ☐ | ☐ | ☐ |

**THANK YOU for the thought, time, and effort you have put into completing this questionnaire.**