| STUDENT QUESTIONNAIRE SIMS80                                                                                                                                                                                                                                      |   |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|
| QUESTION 1 Are you a boy or a girl? Girl [ ] Boy [ ]                                                                                                                                                                                                              |   |   |
| QUESTION 2 What was your date of birth? Month Year                                                                                                                                                                                                                |   |   |
| QUESTION 3 What is your father's occupation? (If your father is dead or is no longer with your family give your guardian's occupation. If you do not have a guardian, please state what your father's occupation was)                                             |   |   |
| Now please describe the work he does and for whom he works. For example, if he is a 'salesman', tell what he sells and where he works.                                                                                                                            |   |   |
|                                                                                                                                                                                                                                                                   |   |   |
| QUESTION 4  (a) Does your mother have an occupation other than housewife?  (If your mother is dead or is no longer with your family give your female guardian's occupation. If you do not have a female guardian, please state what your mother's occupation was) |   |   |
| My mother has no occupation other than housewife                                                                                                                                                                                                                  | ] | ] |
| My mother has a part-time occupation other than housewife                                                                                                                                                                                                         | [ | ] |
| My mother has a full-time occupation other than housewife                                                                                                                                                                                                         | [ | ] |
| (b) If your mother has an occupation (part-time or full-time),<br>please explain, just as you did for your father, what<br>your mother's occupation is other than housewife. Please<br>tell the duties she performs and for whom she                              |   |   |

works.

| Check the e.g., if     | 5 highest level of education completed by your father, your father left secondary school early but later a trade certificate at a Polytechnical College you ck E.                                                                                                            |                  |       |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------|
| A<br>B<br>C<br>D<br>*E | Left school before the end of primary school Left school after finishing primary school Left before finishing secondary school Left after finishing secondary school Completed a trade certificate for a specialized occupation Attended college, university or some form of | [ [ [            | ] ] ] |
| *G<br>QUESTION         | tertiary education Finished a college, university or tertiary education course                                                                                                                                                                                               | [                | ]     |
|                        | highest level of education completed by your mother.                                                                                                                                                                                                                         |                  |       |
| A<br>B<br>C<br>D<br>*E | Left school before the end of primary school Left school after finishing primary school Left before finishing secondary school Left after finishing secondary school Completed a trade certificate for a specialized occupation                                              | ]<br>[<br>]      | ] ] ] |
| *F                     | Attended college, university or some form of tertiary education                                                                                                                                                                                                              | [                | ]     |
| *G                     | Finished a college, university or tertiary education course                                                                                                                                                                                                                  | [                | ]     |
| Do your pa             | 7 arents speak (National Center to insert language of on in school) at home?                                                                                                                                                                                                 |                  |       |
| A<br>B<br>C<br>D       | They do not speak () at home Sometimes speak () at home Usually speak () at home Speak only () at home                                                                                                                                                                       | ]<br>[<br>]      | ] ]   |
| After this             | 8 s year, how many more years of full-time (include y, college, etc.) education do you expect or plan te?                                                                                                                                                                    |                  |       |
| A<br>B<br>C<br>D<br>E  | None at all ( 0 years ) Up to 2 years More than 2 years - up to 5 years More than 5 years - up to 8 years More than 8 years                                                                                                                                                  | [<br>[<br>[<br>[ | ] ] ] |

| QUESTION 9 About how many hours of homework in mathematics, outside of formal class time, have you been doing each week?                                                      |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Give a response for what you actually did last week as well as a response for what you think you do in a typical week.                                                        |            |
| Hours last week Hours in a typical week                                                                                                                                       |            |
| QUESTION 10 About how many hours of homework for all subjects, outside of formal class time, do you usually do each week?                                                     |            |
| Hours last week Hours in a typical week                                                                                                                                       |            |
| QUESTION 11 How much extra mathematics tutoring or instruction do you receive outside of your school in a typical week? (Give your answer to the nearest hour)                |            |
| (National Centers should translate 'school' to mean the normal day time classes as would be reflected by the school's response to questions 8-10 in the School Questionnaire) | S          |
| Hours last week Hours in a typical week                                                                                                                                       |            |
| QUESTION 12<br>So far this year how frequently have your parents helped you with your mathematics? (Check one)                                                                |            |
| Never or very infrequently Occasionally Regularly                                                                                                                             | [ ]<br>[ ] |

# QUESTION 13 Do you use one or more of the following? (Check all that apply)

|   |                                                                     | - Within -In Mathemathics-In other -<br>- Home - Classes - Classes - |
|---|---------------------------------------------------------------------|----------------------------------------------------------------------|
| А | abacus (soroban)                                                    |                                                                      |
| В | slide rule                                                          |                                                                      |
| С | four-function calculator                                            |                                                                      |
| D | 'scientific' (i.e., pre-<br>programmed multifunction)<br>calculator |                                                                      |
| E | 'programmable' calculator                                           |                                                                      |
| F | personal computer or terminal                                       |                                                                      |
|   |                                                                     |                                                                      |

# QUESTION 14

(a) Do you use these devices in school? Please fill in each cell with

N for No Y for Yes

|   |                               |            |                                                    |   | _           |
|---|-------------------------------|------------|----------------------------------------------------|---|-------------|
|   |                               | - function | - Scientific or<br>- Programmable<br>r- Calculator |   | -<br>-<br>- |
| А | checking answers to exercises | -          | -                                                  |   | -<br>-<br>- |
|   |                               |            |                                                    |   | _           |
| В | as an aid in solving          | -          | -                                                  | - | -           |
|   | problems                      | _          | _                                                  | _ | _           |
|   |                               |            |                                                    |   | -           |
| С | for taking tests              | -          | -                                                  | - | -           |
|   |                               |            |                                                    |   | -           |
| D | as an aid in doing            | _          | -                                                  | - | -           |
|   | projects                      | -          | -                                                  | - | -           |
|   |                               |            |                                                    |   | -           |
| E | for recreation                | -          | -                                                  | - | -           |
|   |                               |            |                                                    |   | -           |
|   | (b) At home                   | _          | -                                                  | - | -           |
| F | to do homevork                | _          | -                                                  | _ | -           |
|   |                               |            |                                                    |   | _           |

Below are some statements about you, your mother or father (or both) and mathematics. You are asked to mark each statement in terms of how well it describes what your parent does or thinks about mathematics. Is it like what they do or think? Is it not like what they do or think?

For example, consider the statement:

"My father thinks that mathematics is fun."

If this describes what your father thinks about mathematics mark the response as shown below

- Exactly - Somewhat Unsure Not very Not at - like - like much like all like

Make only one response to each item. Please ensure that you answer all items.

(a) My father seems to like doing mathematics.

Exactly Somewhat Unsure Not very Not at like like much like all like

(b) My mother seems to like doing mathematics.

Exactly Somewhat Unsure Not very Not at like like much like all like

(c) My father would usually be able to do my mathematics homework problems if I asked him to help.

Exactly Somewhat Unsure Not very Not at like like much like all like

(d) My mother would usually be able to do my mathematics homework problems if I asked her to help.

Exactly Somewhat Unsure Not very Not at like like much like all like

(e) My parents are not usually very interested in helping me with mathematics.

Exactly Somewhat Unsure Not very Not at like like much like all like

(f) My mother thinks that learning mathematics is very important for me.

Exactly Somewhat Unsure Not very Not at like like much like all like

(g) My father thinks that learning mathematics is very important for me.

Exactly Somewhat Unsure Not very Not at like like much like all like

(h) My parents encourage me to learn as much mathematics as yossible.

Exactly Somewhat Unsure Not very Not at like like much like all like

(i) My parents want me to do very well in mathematics class.

Exactly Somewhat Unsure Not very Not at like like much like all like

# QUESTION 16 Checking an answer to a problem by going back over it.

| a | very important<br>important | important | undecided | not<br>important | not at all important |
|---|-----------------------------|-----------|-----------|------------------|----------------------|
| b | very easy                   | easy      | undecided | hard             | very hard            |
| С | like a lot                  | like      | undecided | dislike          | dislike a lot        |

# QUESTION 17 Memorizing rules and folmulae.

| a | very important<br>important | important | undecided | not<br>important | not at all important |
|---|-----------------------------|-----------|-----------|------------------|----------------------|
| b | very easy                   | easy      | undecided | hard             | very hard            |
| С | like a lot                  | like      | undecided | dislike          | dislike a lot        |

# QUESTION 18 Solving word problems.

| a | very important important | important | undecided | not<br>important | not at all important |
|---|--------------------------|-----------|-----------|------------------|----------------------|
| b | very easy                | easy      | undecided | hard             | very hard            |
| С | like a lot               | like      | undecided | dislike          | dislike a lot        |

QUESTION 19
Getting information from statistical tables.

| a                                         | very important important          | important | undecided | not<br>important | not at all important |  |  |  |  |
|-------------------------------------------|-----------------------------------|-----------|-----------|------------------|----------------------|--|--|--|--|
| b                                         | very easy                         | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                         | like a lot                        | like      | undecided | dislike          | dislike a lot        |  |  |  |  |
|                                           | QUESTION 20<br>Solving equations. |           |           |                  |                      |  |  |  |  |
| a                                         | very important important          | important | undecided | not<br>important | not at all important |  |  |  |  |
| b                                         | very easy                         | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                         | like a lot                        | like      | undecided | dislike          | dislike a lot        |  |  |  |  |
|                                           | ON 21 g theorems.                 |           |           |                  |                      |  |  |  |  |
| a                                         | very important important          | important | undecided | not<br>important | not at all important |  |  |  |  |
| b                                         | very easy                         | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                         | like a lot                        | like      | undecided | dislike          | dislike a lot        |  |  |  |  |
|                                           | ON 22<br>vectors.                 |           |           |                  |                      |  |  |  |  |
| a                                         | very important important          | important | undecided | not<br>important | not at all important |  |  |  |  |
| b                                         | very easy                         | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                         | like a lot                        | like      | undecided | dislike          | dislike a lot        |  |  |  |  |
| QUESTION 23 Working with complex numbers. |                                   |           |           |                  |                      |  |  |  |  |
| a                                         | very important<br>important       | important | undecided | not<br>important | not at all important |  |  |  |  |
| b                                         | very easy                         | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                         | like a lot                        | like      | undecided | dislike          | dislike a lot        |  |  |  |  |

QUESTION 24 Investigating sequences and series.

| а                                                   | very important important               | important | undecided | not<br>important | not at all important |  |  |  |  |
|-----------------------------------------------------|----------------------------------------|-----------|-----------|------------------|----------------------|--|--|--|--|
| b                                                   | very easy                              | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                                   | like a lot                             | like      | undecided | dislike          | dislike a lot        |  |  |  |  |
|                                                     | QUESTION 25 Differentiating functions. |           |           |                  |                      |  |  |  |  |
| a                                                   | very important important               | important | undecided | not<br>important | not at all important |  |  |  |  |
| b                                                   | very easy                              | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                                   | like a lot                             | like      | undecided | dislike          | dislike a lot        |  |  |  |  |
| _                                                   | ON 26<br>g graphs of functio           | ns.       |           |                  |                      |  |  |  |  |
| а                                                   | very important important               | important | undecided | not<br>important | not at all important |  |  |  |  |
| b                                                   | very easy                              | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                                   | like a lot                             | like      | undecided | dislike          | dislike a lot        |  |  |  |  |
|                                                     | ON 27<br>g a limit of a func           | tion.     |           |                  |                      |  |  |  |  |
| a                                                   | very important important               | important | undecided | not<br>important | not at all important |  |  |  |  |
| b                                                   | very easy                              | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                                   | like a lot                             | like      | undecided | dislike          | dislike a lot        |  |  |  |  |
| QUESTION 28<br>Solving systems of linear equations. |                                        |           |           |                  |                      |  |  |  |  |
| a                                                   | very important important               | important | undecided | not<br>important | not at all important |  |  |  |  |
| b                                                   | very easy                              | easy      | undecided | hard             | very hard            |  |  |  |  |
| С                                                   | like a lot                             | like      | undecided | dislike          | dislike a lot        |  |  |  |  |

Determining the probability of an outcome.

| a | very important important | important | undecided | not<br>important | not at all important |
|---|--------------------------|-----------|-----------|------------------|----------------------|
| b | very easy                | easy      | undecided | hard             | very hard            |
| С | like a lot               | like      | undecided | dislike          | dislike a lot        |

# QUESTION 30

Using a hand-held calculator.

| а | very important important | important | undecided | not<br>important | not at all important |
|---|--------------------------|-----------|-----------|------------------|----------------------|
| b | very easy                | easy      | undecided | hard             | very hard            |
| С | like a lot               | like      | undecided | dislike          | dislike a lot        |

#### QUESTION 31

Mathematics will change rapidly in the near future.

| Strongly | Disagree | Undecided | Agree | Strongly |
|----------|----------|-----------|-------|----------|
| Disagree |          |           |       | Agree    |

#### QUESTION 32

Mathematics is a good fie]d for creative people.

| Strongly | Disagree | Undecided | Agree | Strongly |
|----------|----------|-----------|-------|----------|
| Disagree |          |           |       | Agree    |

### QUESTION 33

There is little place for originality in solving mathematics problems.

| Strongly | Disagree | Undecided | Agree | Strongly |
|----------|----------|-----------|-------|----------|
| Disagree |          |           |       | Agree    |

# QUESTION 34

New discoveries in mathematics are constantly being made.

| Strongly | Disagree | Undecided | Agree | Strongly |
|----------|----------|-----------|-------|----------|
| Disagree |          |           |       | Agree    |

#### QUESTION 35

Mathematics helps one to think according to strict rules.

| Strongly | Disagree | Undecided | Agree | Strongly |
|----------|----------|-----------|-------|----------|
| Disagree |          |           |       | Agree    |

OUESTION 36

Estimating is an important mathematics skill.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 37

There are many different ways to solve most mathematics problems.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 38

Learning mathematics involves mostly memorizing.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 39

In mathematics, problems can be solved without using rules.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 40

Trial and error can often be used to solve a mathematics problem.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 41

There is always a rule to follow in solving a mathematics problem.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 42

There have probably not been any new discoveries in mathematics for a long time.

Mathematics is a set of rules.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 44

A mathematics problem can always be solved in different ways.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 45

Mathematics helps one to think logically.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 46

I really want to do well in mathematics.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 47

My parents really want me to do well in mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 48

I am looking forward to taking more mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 49

I feel good when I solve a mathematics problem by myself.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 50

I usually understand what we are talking about in mathematics class.

I am not so good at mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

#### QUESTION 52

I like to help others with mathematics problems.

Strongly Disagree Undecided Agree Strongly Disagree Agree

#### QUESTION 53

If I had my choice I would not learn any more mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

#### QUESTION 54

I feel challlenged when I am given a difficult mathematics problem.

Strongly Disagree Undecided Agree Strongly Disagree Agree

# QUESTION 55

I refuse to spend a lot of my own time doing mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

## QUESTION 56

Mathematics is harder for me than for most persons.

Strongly Disagree Undecided Agree Strongly Disagree Agree

#### OUESTION 57

I could never be a good mathematician.

No matter how hard I try I still do not do well in mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 59

I will work a long time in order to understand a new idea in mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 60

Working with numbers makes me happy.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 61

It scares me to have to take mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 62

I usually feel calm when doing mathematics problems.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 63

I think mathematics is fun.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 64

When I cannot figure out a problem, I feel as though I am lost in a maze of words and cannot find my way out.

Men make better scientists and engineers than women.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 66

Boys have more natural ability in mathematics than girls.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 67

Boys need to know more mathematics than girls.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 68

A woman needs a career just as much as a man does.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 69

It is important to know mathematics such as algebra or geometry in order to get a good job.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 70

Most people do not use mathematics such as algebra or geometry in their job.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

OUESTION 71

I would like to work at a job that lets me use mathematics.

OUESTION 72

Mathematics is useful in solving everyday problems.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

OUESTION 73

I can get along well in everyday life without using mathematics.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 74

Most of mathematics has practical use on the job.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 75

Mathematics is not needed in everyday living.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 76

A knowledge of mathematics is not necessary in most occupations.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 77

Computers can think.

Strongly Disagree Undecided Agree Strongly
Disagree Agree

QUESTION 78

Someday computers will run everything.

Strongly Disagree Undecided Agree Strongly Disagree Agree

QUESTION 79

Computers make learning mathematics more enjoyable.

Everyone should learn about computers.

Strongly Disagree Undecided Agree Strongly Disagree Agree

#### QUESTION 81

Using a hand calculator makes it more fun to solve problems in mathematics.

Strongly Disagree Undecided Agree Strongly Disagree Agree

#### QUESTION 82

Mathematical ideas can be learned faster if you use a hand calculator.

Strongly Disagree Undecided Agree Strongly Disagree Agree

#### QUESTION 83

If you use a hand calculator you do not have to learn how to compute.

Strongly Disagree Undecided Agree Strongly Disagree Agree

### QUESTION 84

Using a hand calculator can help you learn many different mathematical topics.