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 .. SECTION 4 ..  
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 .. QUESTIONNAIRE ITEM TABLE ..  
 .....  
 .....

THIS TABLE DEFINES THE DATA LEVEL, VARIABLE NAME, LONGITUDINAL INSTRUMENT LOCATION, DATA RECORD AND POSITION AND COLUMN WIDTH, SCALE IDENTIFICATION (FOR ATTITUDES), CROSSREFERENCE TO THE CROSSECTIONAL INSTRUMENTATION, AND VARIABLE TITLE FOR EACH RESPONSE ITEM FROM ALL THE SURVEY QUESTIONNAIRES, EXCEPTING ONLY THE COGNITIVE INSTRUMENTS. THE TABLE CONTAINS INFORMATION CONCERNING ANY EXCEPTIONS IN THE APPLICATION OF AN ITEM IN A PARTICULAR COUNTRY. IN ADDITION TO THE INTERNATIONALLY DEFINED VARIABLES, THE TABLE INCLUDES INFORMATION ABOUT ALL NATIONAL OPTION VARIABLES.

THE INFORMATION IN THE TABLE IS PRESENTED AT THE MOST DETAILED LEVEL, WITH SEPARATE INFORMATION FOR EACH PART OF EACH MULTI-PART QUESTION. FOR EACH SUCH ITEM, THERE IS ONE LINE OF INTERNATIONAL INFORMATION PLUS ONE LINE OF NATIONAL INFORMATION FOR EACH COUNTRY DOCUMENTED IN THIS FILE FOR WHICH A NON-STANDARD APPLICATION OF THE ITEM WAS MADE. THE NATIONAL LINE WILL BE OMITTED IF THE INSTRUMENT CORRESPONDING TO THE ITEM WAS NOT USED AT ALL IN THE COUNTRY (SEE SECTION 1 ABOVE), OR IF THE USE WAS STANDARD AND WITHOUT SAMPLING. THE NATIONAL LINE IS REQUIRED FOR NATIONAL OPTION ITEMS, WHICH ARE IDENTIFIED BY THE LETTER 'Z' APPEARING AS THE SECOND LETTER OF THE NAME.

.....  
 . INTERNATIONAL LINE .  
 .....

- 1 LEVEL
  - 0 POPULATION
  - 1 STRATUM (THERE ARE NO INTERNATIONAL ITEMS HERE)
  - 2 SCHOOL
  - 3 CLASS (THERE ARE NO INTERNATIONAL ITEMS HERE)
  - 4 TEACHER
  - 5 STUDENT

- 3-10 VARIABLE NAME FOR THE ITEM. THIS CONTAINS UP TO EIGHT CHARACTERS. THE FIRST LETTER INDICATES THE DATA SOURCE, AS FOLLOWS...
  - P POPULATION IDENTIFICATION
  - Q STRATUM INFORMATION (NO INTERNATIONAL ITEMS)
  - S SCHOOL QUESTIONNAIRE
  - K BEGINNING-OF-YEAR CLASSROOM DATA
  - L END-OF-YEAR CLASSROOM DATA
  - T TEACHER BACKGROUND QUESTIONNAIRE
  - F FRACTIONS TOPIC-SPECIFIC QUESTIONNAIRE
  - R RATIO-PROPORTION-PERCENT TOPIC-SPECIFIC QUESTIONNAIRE
  - M MEASUREMENT TOPIC-SPECIFIC QUESTIONNAIRE
  - G GEOMETRY TOPIC-SPECIFIC QUESTIONNAIRE
  - A ALGEBRA TOPIC-SPECIFIC QUESTIONNAIRE

C CLASSROOM PROCESS GENERAL QUESTIONNAIRE  
 X BEGINNING-OF-YEAR STUDENT BACKGROUND AND  
 ATTITUDE QUESTIONNAIRE  
 Y END-OF-YEAR STUDENT BACKGROUND AND ATTITUDE  
 QUESTIONNAIRE

GENERALLY, THE SECOND, AND POSSIBLY THE THIRD AND FOURTH  
 LETTERS, INDICATE BLOCKS OF ITEMS, AND THE LAST LETTER OF  
 THE NAME IS USED TO DIFFERENTIATE THE VARIABLES  
 CORRESPONDING TO SUBPARTS OF THE SAME QUESTION (E.G., T  
 FOR TYPICAL WEEK, L FOR LAST WEEK). WHEN THE SECOND  
 LETTER IS 'Z', THE VARIABLE IS A NATIONAL OPTION  
 VARIABLE.

- 12-14 LONGITUDINAL INSTRUMENT NUMBER.
- 16-18 LONGITUDINAL QUESTION NUMBER.
- 20-21 LONGITUDINAL SUBQUESTION NUMBER OR CODE.
- 23 CARD (RECORD) NUMBER, FROM THE LONGITUDINAL CODEBOOK.
- 25-26 FIRST POSITION (COLUMN) NUMBER, FROM THE LONGITUDINAL  
CODEBOOK.
- 28 WIDTH OF THE DATA FIELD. NOTE THAT IS A UNIFORM CONVENTION  
OF THIS STUDY THAT MISSING DATA IS CODED AS A FIELD FILLED  
WITH 9'S (9, 99, 999, ETC.). ALSO, EXCEPT POSSIBLY FOR NATIONAL  
SAMPLING DATA, ALL DATA ITEMS ARE INTEGERS, RIGHT-JUSTIFIED WITH  
LEFT ZERO FILL.

FURTHERMORE, IT IS UNDERSTOOD THAT CODE 8 WAS USED IN  
FRANCE FOR 'UNCODABLE' INFORMATION.

- 30 ATTITUDE SCALE IDENTIFICATION.
  - 1 HOME SUPPORT
  - 2 MATHEMATICS IN SCHOOL
  - 3 MATHEMATICS AS A PROCESS
  - 4 MATHEMATICS AND MYSELF
  - 5 MATHEMATICS ANXIETY
  - 6 SEX STEREOTYPING
  - 7 MATHEMATICS AND SOCIETY
  - 8 COMPUTERS, CALCULATORS, AND MATHS
- 32-33 QUESTION NUMBER FOR THE CROSSECTIONAL VERSION OF THE  
ITEM. MANY LONGITUDINAL ITEMS HAVE NO CROSSECTIONAL  
COUNTERPARTS.
- 35-74 SHORT TITLE FOR THE VARIABLE, SUITABLE FOR PROGRAM LABELS.

.....  
 .. NATIONAL LINE ..  
 .....

- 3-4 COUNTRY CODE NUMBER.
- 6 ITEM QUALITY.
  - 0 NOT USED
  - 1 USED BUT SPOILED
  - 2 NON-STANDARD CODING AND TEXT
  - 3 NON-STANDARD CODING
  - 4 NON-STANDARD TEXT
  - 5 USED IN STANDARD FORM

9 NATIONAL OPTION ITEM

12-80 COMMENTS CONCERNING PROBLEMS WITH QUALITY, REASON FOR  
NON-APPLICATION, NONSTANDARD POSITION, ETC., OR NATURE OF  
NATIONAL OPTION QUESTION.

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0	PCOUNT			0	0	2		NAME OF THE COUNTRY
1	QSTRAT			0	0	2		PRINCIPAL STRATIFICATION CODE
2	SAREA	800	1	1	20	1	1	KIND OF COMMUNITY SERVED BY SCHOOL
	15	3						Expanded and reordered coding
	40	3						Contracted coding?
	54	3						Added code 6 for undecided
2	SENROLB	800	2	1	1	21	4	2 BOYS..TOTAL ENROLMENT IN SCHOOL
2	SENROLG	800	2	2	1	25	4	2 GIRLS..TOTAL ENROLMENT IN SCHOOL
2	SAPOPB	800	3	A1	1	29	4	3 BOYS..POPULATION A STUDENTS IN SCHOOL
	15	4						Apparently this is number of population A girls
2	SAPOPG	800	3	A2	1	33	4	3 GIRLS..POPULATION A STUDENTS IN SCHOOL
	15	0						Not available, but see SAPOPB
2	SNOMTHB	800	3	B1	1	37	4	3 BOYS..POP A WHO DO NOT TAKE MATH
	15	0						Not used, since all take math
	22	0						Not used, since all take math
	40	0						Not used, since all take math
	54	0						Not used, since all take math
2	SNOMTHG	800	3	B2	1	41	4	3 GIRLS..POP A WHO DO NOT TAKE MATH
	15	0						Not used, since all take math
	22	0						Not used, since all take math
	40	0						Not used, since all take math
	54	0						Not used, since all take math
2	STCHS	800	4		1	45	3	4 NUMBER OF FULL-TIME TEACHING STAFF
2	SSOMMM	800	5	1	1	48	3	5 MALES..TEACHING ONE OR MORE MATHS
2	SSOMMF	800	5	2	1	51	3	5 FEMALES..TEACHING ONE OR MORE MATHS
2	SALLMM	800	6	1	1	54	3	6 MALES..TEACHING MATH EXCLUSIVELY
2	SALLMF	800	6	2	1	57	3	6 FEMALES..TEACHING MATH EXCLUSIVELY
2	SSPECM	800	7	1	1	60	3	7 MALES..QUALIFIED MATH SPECIALISTS
	22	4						Defined specialist as math majors or math ed concentration
	63	4						Defined specialist form 3 level teachers of math
2	SSPECF	800	7	2	1	63	3	7 FEMALES..QUALIFIED MATH SPECIALISTS
	22	4						Defined specialist as math majors or math ed concentration
	63	4						Defined specialist form 3 level teachers of math
2	SDAYSYR	800	8		1	66	3	8 OFFICIAL SCHOOL DAYS PER YEAR
	15	4						Not asked, imputed by national centre
	40	4						Not asked, imputed by national centre
2	SSCHPER	800	9	1	69	2	9	AVERAGE NUMBER OF PERIODS PER SCHOOL DAY
	15	4						Not asked, imputed by national centre
	54	2						Records periods per school week of 5.5 days
2	SPERLEN	800	10		1	71	3	10 AVERAGE LENGTH OF EACH PERIOD IN MINUTES
	15	4						Not asked, imputed by national centre
2	SCALSUB	800	11		1	74	1	11 WHICH SUBJECTS CALCULATORS ENCOURAGED
2	SMEET	800	12		1	75	1	12 FREQUENCY MEETINGS MATHEMATICS TEACHERS
	15	3						Expanded coding with 6=2+3, 7=3+4, 8=1+2
	54	2						Could be per term or per year, question was unclear
2	SDOWHAT	800	13		1	76	1	13 ACTIVITIES AT THE MATH TEACHER MEETINGS
	15	3						Expanded coding
	40	3						Contracted coding
2	SPOLFF	800	14		1	77	1	14 POLICY ON FOUR FUNCTION CALCULATOR
2	SPOLPP	800	15		1	78	1	15 POLICY ON PROGRAMMED CALCULATOR
2	SSTREAM	800	16		1	79	1	16 SETTING OR STREAMING POP A MATH
	15	3						Modified coding with 3=stream, 4=set, 2=no, 1=both
	22	4						Modified question
	25	2						Streaming omitted and modified codes, but recoded ok

81 3 Contracted coding?

2 SBGMATH 800 17 1 80 1 17 DIFFERENT CURRICULUM FOR BOYS AND GIRLS  
40 3 Modified coding with code 6?

4 TSEX 600 1 1 20 1 1 YOUR SEX  
4 TAGE 600 2 1 21 2 2 YOUR AGE IN YEARS  
4 TEXPTCH 600 3 1 23 2 3 YEARS OF EXPERIENCE AS A TEACHER  
4 TEXPMT 600 4 1 25 2 4 YEARS TEACHING MATHEMATICS TO POP A  
4 TEDMATH 600 5 1 27 2 5 SEMESTERS POSTSECONDARY MATHEMATICS  
15 0 Not used  
22 2 Asked how many courses  
25 2 Multichoice format recoded ok

4 TEDMED 600 6 1 29 2 6 SEMESTERS POSTSECONDARY MATH PEDAGOGY  
15 0 Not used  
22 2 Asked how many courses  
25 2 Multichoice format recoded ok

4 TEDGED 600 7 1 31 2 7 SEMESTERS POSTSECONDARY GENERAL PEDAGOGY  
15 0 Not used  
22 2 Asked how many courses  
25 2 Multichoice format recoded ok

4 THRSTCH 600 8 1 33 2 8 TOTAL NUMBER OF TEACHING PERIODS  
4 THRSMTH 600 9 1 35 2 9 PERIODS PER WEEK TEACHING MATHEMATICS  
4 TSCITCH 600 10 A 1 37 1 10 ALSO TEACHER OF SCIENCE  
4 TOTHTCH 600 10 B 1 38 1 10 ALSO TEACHER IN OTHER AREAS  
4 THOD 600 10 C 1 39 1 10 ALSO HEAD OF THE MATHEMATICS DEPARTMENT  
40 0 Not used, inadequate

4 TADGEN 600 10 D 1 40 1 10 ALSO SCHOOL ADMINISTRATOR GENERAL  
15 4 Asked about class administrator  
40 0 Not used

4 TADSUB 600 10 E 1 41 1 10 ALSO SCHOOL ADMINISTRATOR SUBJECT AREA  
15 4 Asked about other duties  
40 0 Not used

4 TPOPAC 600 11 A1 1 42 1 11 CLASSES..POPULATION A  
81 0 Not used?

4 TPOPAH 600 11 A2 1 43 2 11 HOURS..POPULATION A  
4 TLOWAC 600 11 B1 1 45 1 11 CLASSES..LOWER THAN POPULATION A  
81 0 Not used?

4 TLOWAH 600 11 B2 1 46 2 11 HOURS..LOWER THAN POPULATION A  
4 THIGHAC 600 11 C1 1 48 1 11 CLASSES..HIGHER THAN POPULATION A  
81 0 Not used?  
54 0 Not used

4 THIGHAH 600 11 C2 1 49 2 11 HOURS..HIGHER THAN POPULATION A  
54 0 Not used

4 TSBJCTS 600 12 1 51 1 12 HOW MANY SUBJECTS TO THE TARGET CLASS  
22 3 Codes reversed, recoded ok  
54 3 Codes reversed, recoded ok

4 TNTCHS 600 13 1 52 1 13 OTHER TEACHERS MATH TO TARGET CLASS  
4 TNSTUDS 600 14 1 53 2 14 STUDENTS ENROLLED IN THE TARGET CLASS  
4 TPPWEEK 600 15 1 55 2 15 PERIODS OF MATH INSTRUCTION EACH WEEK  
4 TLENPER 600 16 1 57 3 16 AVERAGE LENGTH OF CLASS PERIOD MINUTES  
4 THPYEAR 600 17 1 60 3 17 HOURS OF MATH INSTRUCTION BY END OF YEAR  
4 TCFMATH 600 18 1 63 1 18 TARGET CLASS COMPARED WITH OTHER CLASSES  
22 2 Did not include no other classes alternative, recodes ok?

4 TRANGE 600 19 1 64 1 19 RANGE OF MATHEMATICS ABILITIES CLASS  
4 TMASTRY 600 20 1 65 3 20 MASTERY OF PREVIOUS CURRICULUM  
4 TMTHSUB 600 21 1 68 1 21 CHARACTER OF MAIN MATH SUBJECT MATTER  
4 TTOP 600 22 A 1 69 2 22 NUMBER OF STUDENTS IN NATIONAL TOP THIRD  
4 TMIDDLE 600 22 B 1 71 2 22 NUMBER OF STUDENTS IN NATIONAL MID THIRD  
4 TBOTTOM 600 22 C 1 73 2 22 NUMBER OF STUDENTS IN NATIONAL BOTTOM  
4 TNOJDG 600 22 D 1 75 2 22 NUMBER OF STUDENTS UNABLE TO JUDGE  
4 TZ15A 1 77 1 UNKNOWN  
15 6 Unknown coding

4	TZ79A1			1	77	2	UNKNOWN
	79 6	Unknown coding					
4	TZ79A2			1	79	2	UNKNOWN
	79 6	Unknown coding					
4	TPREPL	600	23	A1	2	20	3 23 LAST WEEK..PREPARATION FOR MATH
4	TPREPT	600	23	A2	2	23	3 23 TYPICAL WEEK..PREPARATION FOR MATH
4	TGRADEL	600	23	B1	2	26	3 23 LAST WEEK..GRADING STUDENT WORK
4	TGRADET	600	23	B2	2	29	3 23 TYPICAL WEEK..GRADING STUDENT WORK
4	TEXPLNL	600	23	C1	2	32	3 23 LAST WEEK..EXPLAINING NEW CONTENT
4	TEXPLNT	600	23	C2	2	35	3 23 TYPICAL WEEK..EXPLAINING CONTENT
4	TREVUL	600	23	D1	2	38	3 23 LAST WEEK..REVIEWING NOT NEW CONTENT
4	TREVUT	600	23	D2	2	41	3 23 TYPICAL WEEK..REVIEWING NOT NEW CONTENT
4	TADMINL	600	23	E1	2	44	3 23 LAST WEEK..ROUTINE ADMINISTRATION
4	TADMINT	600	23	E2	2	47	3 23 TYPICAL WEEK..ROUTINE ADMINISTRATION
4	TORDERL	600	23	F1	2	50	3 23 LAST WEEK..MAINTAINING CLASS ORDER
4	TORDERT	600	23	F2	2	53	3 23 TYPICAL WEEK..MAINTAINING CLASS ORDER
4	TTESTL	600	24	A1	2	56	3 24 LAST WEEK..TAKING TESTS AND QUIZZES
4	TTESTT	600	24	A2	2	59	3 24 TYPICAL WEEK..TAKING TESTS AND QUIZZES
4	TSEATL	600	24	B1	2	62	3 24 LAST WEEK..SEAT OR BLACKBOARD WORK
4	TSEATT	600	24	B2	2	65	3 24 TYPICAL WEEK..SEAT OR BLACKBOARD WORK
4	TLISTL	600	24	C1	2	68	3 24 LAST WEEK..WHOLE CLASS LECTURES
4	TLISTT	600	24	C2	2	71	3 24 TYPICAL WEEK..WHOLE CLASS LECTURES
4	TGROUPL	600	24	D1	2	74	3 24 LAST WEEK..WORKING IN SMALL GROUPS
4	TGROUPT	600	24	D2	2	77	3 24 TYPICAL WEEK..WORKING IN SMALL GROUPS
4	TQUEST	600	25		3	20	1 25 HOW MANY STUDENTS CALLED ORAL QUESTIONS
	15 3	Added alternative 5 = no such situation					
4	TDIFASG	600	26		3	21	1 26 DIFFERENTIATED EXERCISES ASSIGNMENTS
	22 3	Codes 1 and 3 reversed, recoded ok					
4	THWRKL	600	27	A	3	22	2 27 LAST WEEK..HOURS TO COMPLETE HOMEWORK
4	THWRKT	600	27	B	3	24	2 27 TYPICAL WEEK..HOURS TO COMPLETE HOMEWORK
4	TFFCALC	600	28	A	3	26	1 28 USE FOUR FUNCTION CALCULATORS
4	TPPCALC	600	28	B	3	27	1 28 USE OF PROGRAMMED SCIENTIFIC CALCULATORS
4	TCCCHK	600	29	A	3	28	1 29 CALCULATORS TO CHECK ANSWERS TO EXERCISES
4	TCCHWRK	600	29	B	3	29	1 29 CALCULATORS TO DO HOMEWORK
4	TCCSLV	600	29	C	3	30	1 29 CALCULATORS AS AN AID TO SOLVE PROBLEMS
4	TCCTEST	600	29	D	3	31	1 29 CALCULATORS TO TAKE TESTS
4	TCCPROJ	600	29	E	3	32	1 29 CALCULATORS AS AN AID TO DO PROJECTS
4	TCCPLSR	600	29	F	3	33	1 29 CALCULATORS FOR RECREATION
4	TFRACP	600	30	A1	3	34	2 30 PERIODS..COMMON FRACTIONS
4	TFRACR	600	30	A2	3	36	1 30 REVIEW..COMMON FRACTIONS
	15 3	Added alternative 3 = review with leaving topic as such					
4	TDECIMP	600	30	B1	3	37	2 30 PERIODS..DECIMAL FRACTIONS
4	TDECIMR	600	30	B2	3	39	1 30 REVIEW..DECIMAL FRACTIONS
	15 3	Added alternative 3 = review with leaving topic as such					
4	TRATIOP	600	30	C1	3	40	2 30 PERIODS..RATIO AND PROPORTION
4	TRATIOR	600	30	C2	3	42	1 30 REVIEW..RATIO AND PROPORTION
	15 3	Added alternative 3 = review with leaving topic as such					
4	TPERCP	600	30	D1	3	43	2 30 PERIODS..PERCENTAGE
4	TPERCR	600	30	D2	3	45	1 30 REVIEW..PERCENTAGE
	15 3	Added alternative 3 = review with leaving topic as such					
4	TMESURP	600	30	E1	3	46	2 30 PERIODS..MEASUREMENT
4	TMESURR	600	30	E2	3	48	1 30 REVIEW..MEASUREMENT
	15 3	Added alternative 3 = review with leaving topic as such					
4	TGEOMP	600	30	F1	3	49	2 30 PERIODS..GEOMETRY
4	TGEOMR	600	30	F2	3	51	1 30 REVIEW..GEOMETRY
	15 3	Added alternative 3 = review with leaving topic as such					
4	TFORMLP	600	30	G1	3	52	2 30 PERIODS..FORMULAS AND EQUATIONS
4	TFORMLR	600	30	G2	3	54	1 30 REVIEW..FORMULAS AND EQUATIONS
	15 3	Added alternative 3 = review with leaving topic as such					
4	TINTEGP	600	30	H1	3	55	2 30 PERIODS..INTEGERS
4	TINTEGR	600	30	H2	3	57	1 30 REVIEW..INTEGERS

15 3           Added alternative 3 = review with leaving topic as such  
 4 TPROBP   600 30 I1 3 58 2   30 PERIODS..PROBABILITY AND STATISTICS  
 4 TPROBR   600 30 I2 3 60 1   30 REVIEW..PROBABILITY AND STATISTICS  
 15 3           Added alternative 3 = review with leaving topic as such  
 4 TTEXTBK   600 31 A 3 61 1   31 PUBLISHED TEXTBOOKS  
 4 TWORKBK   600 31 B 3 62 1   31 PUBLISHED WORKBOOKS PROBLEM SETS  
 4 TINDMAT   600 31 C 3 63 1   31 INDIVIDUALIZED MATERIALS  
 4 TVISMAT   600 31 D 3 64 1   31 COMMERCIALY PRODUCED VISUAL MATERIALS  
 4 TPUBTST   600 31 E 3 65 1   31 COMMERCIALY PUBLISHED TESTS  
 4 TOWNMAT   600 31 F 3 66 1   31 TEACHING MATERIALS YOU HAVE WRITTEN  
 4 TOWNTST   600 31 G 3 67 1   31 TESTS YOU HAVE WRITTEN  
 4 TCOMTXT   600 32    3 68 2   32 MAIN TEXTBOOK WORKBOOK NATONAL LIST  
 15 0           Not asked  
 4 TZ79B1                   3 70 2           UNKNOWN  
   79 6           Unknown coding  
 4 TZ79B2                   3 72 2           UNKNOWN  
   79 6           Unknown coding  
 4 TZ79B3                   3 74 2           UNKNOWN  
   79 6           Unknown coding  
 4 TZ79B4                   3 76 2           UNKNOWN  
   79 6           Unknown coding  
 4 TZ54B1                   3 70 1           UNKNOWN  
   54 6           Unknown coding  
 4 TZ54B2                   3 71 1           UNKNOWN  
   54 6           Unknown coding  
 4 TCHKI   600 33 1 4 20 1 2 33 IMPORTANT..CHECKING AN ANSWER  
 4 TCHKE   600 33 2 4 21 1 2 33 EASY..CHECKING AN ANSWER  
 4 TCHKL   600 33 3 4 22 1 2 33 LIKE..CHECKING AN ANSWER  
 4 TMEMI   600 34 1 4 23 1 2 34 IMPORTANT..MEMORIZING RULES FORMULAS  
 4 TMEME   600 34 2 4 24 1 2 34 EASY..MEMORIZING RULES FORMULAS  
 4 TMEML   600 34 3 4 25 1 2 34 LIKE..MEMORIZING RULES FORMULAS  
 4 TWPI   600 35 1 4 26 1 2 35 IMPORTANT..SOLVING WORD PROBLEMS  
 4 TWPE   600 35 2 4 27 1 2 35 EASY..SOLVING WORD PROBLEMS  
 4 TWPL   600 35 3 4 28 1 2 35 LIKE..SOLVING WORD PROBLEMS  
 4 TESTI   600 36 1 4 29 1 2 36 IMPORTANT..ESTIMATING ANSWERS  
 4 TESTE   600 36 2 4 30 1 2 36 EASY..ESTIMATING ANSWERS  
 4 TESTL   600 36 3 4 31 1 2 36 LIKE..ESTIMATING ANSWERS  
 4 TCHANGE 600 37    4 32 1 3 37 MATH WILL CHANGE RAPIDLY NEAR FUTURE  
 15 3           Reversed coding, recoded ok  
 4 TCREATE 600 38    4 33 1 3 38 MATH IS A GOOD FIELD FOR CREATIVE PEOPLE  
 15 3           Reversed coding, recoded ok  
 4 TLTORIG 600 39    4 34 1 3 39 LITTLE PLACE FOR ORIGINALITY IN MATH  
 15 3           Reversed coding, recoded ok  
 4 TNEWWSC 600 40    4 35 1 3 40 NEW DISCOVERIES IN MATH ARE BEING MADE  
 15 3           Reversed coding, recoded ok  
 4 TRULES   600 41    4 36 1 3 41 MATH HELPS ONE THINK IN STRICT RULES  
 15 3           Reversed coding, recoded ok  
 4 TESTIMP 600 42    4 37 1 3 42 ESTIMATING IS AN IMPORTANT MATH SKILL  
 15 3           Reversed coding, recoded ok  
 4 TMNYWYS 600 43    4 38 1 3 43 MANY WAYS TO SOLVE MOST MATH PROBLEMS  
 15 3           Reversed coding, recoded ok  
 4 TMEMRZG 600 44    4 39 1 3 44 LEARNING MATHEMATICS MOSTLY MEMORIZING  
 15 3           Reversed coding, recoded ok  
 4 TWORULE 600 45    4 40 1 3 45 MATH PROBLEMS BE SOLVED WITHOUT RULES  
 15 3           Reversed coding, recoded ok  
 4 TTAESLV 600 46    4 41 1 3 46 TRIAL AND ERROR CAN OFTEN BE USED  
 15 3           Reversed coding, recoded ok  
 4 TALWRUL 600 47    4 42 1 3 47 ALWAYS A RULE SOLVING A MATH PROBLEM  
 15 3           Reversed coding, recoded ok  
 4 TNONEW   600 48    4 43 1 3 48 NO NEW MATH DISCOVERIES FOR A LONG TIME  
 15 3           Reversed coding, recoded ok

4	TMTHRUL	600	49	4	44	1	3	49	MATHEMATICS IS A SET OF RULES
	15		3						Reversed coding, recoded ok
4	TDIFWAY	600	50	4	45	1	3	50	MATH CAN BE SOLVED IN DIFFERENT WAYS
	15		3						Reversed coding, recoded ok
4	TMTHLOG	600	51	4	46	1	3	51	MATHEMATICS HELPS ONE THINK LOGICALLY
	15		3						Reversed coding, recoded ok
4	TZ54C1			4	47	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C2			4	48	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C3			4	49	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C4			4	50	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C5			4	51	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C6			4	52	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C7			4	53	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C8			4	54	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C9			4	55	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C10			4	56	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C11			4	57	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	TZ54C12			4	58	1			UNKNOWN
	54		6						Unknown coding (1-5)
4	FSTEXT	610	1	1	20	1			USE OF..STUDENT TEXTBOOK
4	FSOTEXT	610	2	1	21	1			USE OF..OTHER PUBLISHED TEXT MATERIALS
4	FSLOCAL	610	3	1	22	1			USE OF..LOCALLY PRODUCED TEXT MATERIALS
4	FSINDIV	610	4	1	23	1			USE OF..INDIVIDUALIZED MATERIALS
4	FSFILM	610	5	1	24	1			USE OF..FILMS, FILMSTRIPS, MODELS
4	FSLAB	610	6	1	25	1			USE OF..LABORATORY MATERIALS
4	FTFCNPT	610	7	1	26	1			FRACTION TOPIC..DEVELOPING THE CONCEPT
4	FTFEQU	610	8	1	27	1			FRACTION TOPIC..FINDING EQUIVALENTS
4	FTFADD	610	9	1	28	1			FRACTION TOPIC..ADDING AND SUBTRACTING
4	FTFMUL	610	10	1	29	1			FRACTION TOPIC..MULTIPLYING
4	FTFDIV	610	11	1	30	1			FRACTION TOPIC..DIVIDING
4	FTFORD	610	12	1	31	1			FRACTION TOPIC..ORDERING
4	FTDCNPT	610	13	1	32	1			DECIMAL TOPIC..DEVELOPING THE CONCEPT
4	FTDCNV	610	14	1	33	1			DECIMAL TOPIC..CONVERT DECIMAL COMMON
4	FTDADD	610	15	1	34	1			DECIMAL TOPIC..ADDING AND SUBTRACTING
4	FTDMUL	610	16	1	35	1			DECIMAL TOPIC..MULTIPLYING
4	FTDDIV	610	17	1	36	1			DECIMAL TOPIC..DIVIDING
4	FTDORD	610	18	1	37	1			DECIMAL TOPIC..ORDERING
4	FMFREGE	610	19	1	38	1			EMPHASIZED..FRACTIONS OF REGIONS
4	FMFREGT	610	20	1	39	1			IN TEXT..FRACTIONS OF REGIONS
4	FMFREGK	610	21	1	1	40	1		KNOWN..FRACTIONS OF REGIONS
4	FMFREGS	610	21	2	1	41	1		SYLLABUS..FRACTIONS OF REGIONS
4	FMFREGU	610	21	3	1	42	1		UNDERSTAND..FRACTIONS OF REGIONS
4	FMFREGL	610	21	4	1	43	1		LIKED..FRACTIONS OF REGIONS
4	FMFREGR	610	21	5	1	44	1		RELATED..FRACTIONS OF REGIONS
4	FMFREGF	610	21	6	1	45	1		FUTURE..FRACTIONS OF REGIONS
4	FMFREGH	610	21	7	1	46	1		HARD..FRACTIONS OF REGIONS
4	FMFREGX	610	21	8	1	47	1		TEXT EMPHASIS..FRACTIONS OF REGIONS
4	FMFCOLE	610	23	1	48	1			EMPHASIZED..FRACTIONS OF A COLLECTION
4	FMFCOLT	610	24	1	49	1			IN TEXT..FRACTIONS OF A COLLECTION
4	FMFCOLK	610	25	1	1	50	1		KNOWN..FRACTIONS OF A COLLECTION

4	FMFCOLS	610	25	2	1	51	1	SYLLABUS..FRACTIONS OF A COLLECTION
4	FMFCOLU	610	25	3	1	52	1	UNDERSTAND..FRACTIONS OF A COLLECTION
4	FMFCOLL	610	25	4	1	53	1	LIKED..FRACTIONS OF A COLLECTION
4	FMFCOLR	610	25	5	1	54	1	RELATED..FRACTIONS OF A COLLECTION
4	FMFCOLF	610	25	6	1	55	1	FUTURE..FRACTIONS OF A COLLECTION
4	FMFCOLH	610	25	7	1	56	1	HARD..FRACTIONS OF A COLLECTION
4	FMFCOLX	610	25	8	1	57	1	TEXT EMPHASIS..FRACTIONS OF A COLLECTION
4	FMFLINE	610	27	1	1	58	1	EMPHASIZED..FRACTIONS AS LINE COORDS
4	FMFLINT	610	28	1	1	59	1	IN TEXT..FRACTIONS AS LINE COORDS
4	FMFLINK	610	29	1	1	60	1	KNOWN..FRACTIONS AS LINE COORDS
4	FMFLINS	610	29	2	1	61	1	SYLLABUS..FRACTIONS AS LINE COORDS
4	FMFLINU	610	29	3	1	62	1	UNDERSTAND..FRACTIONS AS LINE COORDS
4	FMFLINL	610	29	4	1	63	1	LIKED..FRACTIONS AS LINE COORDS
4	FMFLINR	610	29	5	1	64	1	RELATED..FRACTIONS AS LINE COORDS
4	FMFLINF	610	29	6	1	65	1	FUTURE..FRACTIONS AS LINE COORDS
4	FMFLINH	610	29	7	1	66	1	HARD..FRACTIONS AS LINE COORDS
4	FMFLINX	610	29	8	1	67	1	TEXT EMPHASIS..FRACTIONS AS LINE COORDS
4	FMFQUOE	610	31	1	1	68	1	EMPHASIZED..FRACTIONS AS QUOTIENTS
4	FMFQUOT	610	32	1	1	69	1	IN TEXT..FRACTIONS AS QUOTIENTS
4	FMFQUOK	610	33	1	1	70	1	KNOWN..FRACTIONS AS QUOTIENTS
4	FMFQUOS	610	33	2	1	71	1	SYLLABUS..FRACTIONS AS QUOTIENTS
4	FMFQUOU	610	33	3	1	72	1	UNDERSTAND..FRACTIONS AS QUOTIENTS
4	FMFQUOL	610	33	4	1	73	1	LIKED..FRACTIONS AS QUOTIENTS
4	FMFQUOR	610	33	5	1	74	1	RELATED..FRACTIONS AS QUOTIENTS
4	FMFQUOF	610	33	6	1	75	1	FUTURE..FRACTIONS AS QUOTIENTS
4	FMFQUOH	610	33	7	1	76	1	HARD..FRACTIONS AS QUOTIENTS
4	FMFQUOX	610	33	8	1	77	1	TEXT EMPHASIS..FRACTIONS AS QUOTIENTS
4	FMFDECE	610	35	2	20	1	EMPHASIZED..FRACTIONS AS DECIMALS	
4	FMFDECT	610	36	2	21	1	IN TEXT..FRACTIONS AS DECIMALS	
4	FMFDECK	610	37	1	2	22	1	KNOWN..FRACTIONS AS DECIMALS
4	FMFDECS	610	37	2	2	23	1	SYLLABUS..FRACTIONS AS DECIMALS
4	FMFDECU	610	37	3	2	24	1	UNDERSTAND..FRACTIONS AS DECIMALS
4	FMFDECL	610	37	4	2	25	1	LIKED..FRACTIONS AS DECIMALS
4	FMFDECR	610	37	5	2	26	1	RELATED..FRACTIONS AS DECIMALS
4	FMFDECF	610	37	6	2	27	1	FUTURE..FRACTIONS AS DECIMALS
4	FMFDECH	610	37	7	2	28	1	HARD..FRACTIONS AS DECIMALS
4	FMFDECX	610	37	8	2	29	1	TEXT EMPHASIS..FRACTIONS AS DECIMALS
4	FMFREPE	610	39	2	30	1	EMPHASIZED..FRACTIONS AS REPEATED ADD	
4	FMFREPT	610	40	2	31	1	IN TEXT..FRACTIONS AS REPEATED ADD	
4	FMFREPK	610	41	1	2	32	1	KNOWN..FRACTIONS AS REPEATED ADD
4	FMFREPS	610	41	2	2	33	1	SYLLABUS..FRACTIONS AS REPEATED ADD
4	FMFREPU	610	41	3	2	34	1	UNDERSTAND..FRACTIONS AS REPEATED ADD
4	FMFREPL	610	41	4	2	35	1	LIKED..FRACTIONS AS REPEATED ADD
4	FMFREPR	610	41	5	2	36	1	RELATED..FRACTIONS AS REPEATED ADD
4	FMFREPF	610	41	6	2	37	1	FUTURE..FRACTIONS AS REPEATED ADD
4	FMFREPH	610	41	7	2	38	1	HARD..FRACTIONS AS REPEATED ADD
4	FMFREPX	610	41	8	2	39	1	TEXT EMPHASIS..FRACTIONS AS REPEATED ADD
4	FMFRATE	610	43	2	40	1	EMPHASIZED..FRACTIONS AS RATIOS	
4	FMFRATT	610	44	2	41	1	IN TEXT..FRACTIONS AS RATIOS	
4	FMFRATK	610	45	1	2	42	1	KNOWN..FRACTIONS AS RATIOS
4	FMFRATS	610	45	2	2	43	1	SYLLABUS..FRACTIONS AS RATIOS
4	FMFRATU	610	45	3	2	44	1	UNDERSTAND..FRACTIONS AS RATIOS
4	FMFRATL	610	45	4	2	45	1	LIKED..FRACTIONS AS RATIOS
4	FMFRATR	610	45	5	2	46	1	RELATED..FRACTIONS AS RATIOS
4	FMFRATF	610	45	6	2	47	1	FUTURE..FRACTIONS AS RATIOS
4	FMFRATH	610	45	7	2	48	1	HARD..FRACTIONS AS RATIOS
4	FMFRATX	610	45	8	2	49	1	TEXT EMPHASIS..FRACTIONS AS RATIOS
4	FMFMSRE	610	47	2	50	1	EMPHASIZED..FRACTIONS AS MEASUREMENTS	
4	FMFMSRT	610	48	2	51	1	IN TEXT..FRACTIONS AS MEASUREMENTS	
4	FMFMSRK	610	49	1	2	52	1	KNOWN..FRACTIONS AS MEASUREMENTS
4	FMFMSRS	610	49	2	2	53	1	SYLLABUS..FRACTIONS AS MEASUREMENTS



4	FMFMSRU	610	49	3	2	54	1	UNDERSTAND..FRACTIONS AS MEASUREMENTS
4	FMFMSRL	610	49	4	2	55	1	LIKED..FRACTIONS AS MEASUREMENTS
4	FMFMSRR	610	49	5	2	56	1	RELATED..FRACTIONS AS MEASUREMENTS
4	FMFMSRF	610	49	6	2	57	1	FUTURE..FRACTIONS AS MEASUREMENTS
4	FMFMSRH	610	49	7	2	58	1	HARD..FRACTIONS AS MEASUREMENTS
4	FMFMSRX	610	49	8	2	59	1	TEXT EMPHASIS..FRACTIONS AS MEASUREMENTS
4	FMFOPRE	610	51		2	60	1	EMPHASIZED..FRACTIONS AS OPERATORS
4	FMFOPRT	610	52		2	61	1	IN TEXT..FRACTIONS AS OPERATORS
4	FMFOPRK	610	53	1	2	62	1	KNOWN..FRACTIONS AS OPERATORS
4	FMFOPRS	610	53	2	2	63	1	SYLLABUS..FRACTIONS AS OPERATORS
4	FMFOPRU	610	53	3	2	64	1	UNDERSTAND..FRACTIONS AS OPERATORS
4	FMFOPRL	610	53	4	2	65	1	LIKED..FRACTIONS AS OPERATORS
4	FMFOPRR	610	53	5	2	66	1	RELATED..FRACTIONS AS OPERATORS
4	FMFOPRF	610	53	6	2	67	1	FUTURE..FRACTIONS AS OPERATORS
4	FMFOPRH	610	53	7	2	68	1	HARD..FRACTIONS AS OPERATORS
4	FMFOPRX	610	53	8	2	69	1	TEXT EMPHASIS..FRACTIONS AS OPERATORS
4	FMFCMPE	610	55		2	70	1	EMPHASIZED..FRACTIONS AS COMPARISONS
4	FMFCMPT	610	56		2	71	1	IN TEXT..FRACTIONS AS COMPARISONS
4	FMFCMPK	610	57	1	2	72	1	KNOWN..FRACTIONS AS COMPARISONS
4	FMFCMPS	610	57	2	2	73	1	SYLLABUS..FRACTIONS AS COMPARISONS
4	FMFCMPU	610	57	3	2	74	1	UNDERSTAND..FRACTIONS AS COMPARISONS
4	FMFCMPL	610	57	4	2	75	1	LIKED..FRACTIONS AS COMPARISONS
4	FMFCMPR	610	57	5	2	76	1	RELATED..FRACTIONS AS COMPARISONS
4	FMFCMPF	610	57	6	2	77	1	FUTURE..FRACTIONS AS COMPARISONS
4	FMFCMPH	610	57	7	2	78	1	HARD..FRACTIONS AS COMPARISONS
4	FMFCMPX	610	57	8	2	79	1	TEXT EMPHASIS..FRACTIONS AS COMPARISONS
4	FMAFREG	610	59		2	80	1	FRACT ADD INTERP..UNION OF TWO REGIONS
4	FMAFCOL	610	60		3	20	1	FRACT ADD INTERP..COMBINE IN COLLECTION
4	FMAFLIN	610	61		3	21	1	FRACT ADD INTERP..ON THE NUMBER LINE
4	FMAFQUO	610	62		3	22	1	FRACT ADD INTERP..SUM OF TWO QUOTIENTS
4	FMAFDEC	610	63		3	23	1	FRACT ADD INTERP..SUM OF TWO DECIMALS
4	FMAFREP	610	64		3	24	1	FRACT ADD INTERP..REPEATED ADD OF UNITS
4	FMAFMSR	610	65		3	25	1	FRACT ADD INTERP..COMBINE MEASUREMENTS
4	FMAFSEG	610	66		3	26	1	FRACT ADD INTERP..JOINING TWO SEGMENTS
4	FMPALDH	610	67		3	27	1	FRACT ADD PROC..LCD HORIZONTAL FORM
4	FMPALDV	610	68		3	28	1	FRACT ADD PROC..LCD VERTICAL FORM
4	FMPAFOR	610	69		3	29	1	FRACT ADD PROC..USING FORMULA
4	FMPACDH	610	70		3	30	1	FRACT ADD PROC..ANY CD HORIZONTAL FORM
4	FMPACDV	610	71		3	31	1	FRACT ADD PROC..ANY CD VERTICAL FORM
4	FMPADEC	610	72		3	32	1	FRACT ADD PROC..DECIMALS
4	FMAFSYM	610	73		3	33	1	SYMBOLIC NUMERIC IN ADDING FRACTIONS
4	FMDLINE	610	74		3	34	1	EMPHASIZED..DECIMAL AS LINE COORD
4	FMDLINT	610	75		3	35	1	IN TEXT..DECIMAL AS LINE COORD
4	FMDLINK	610	76	1	3	36	1	KNOWN..DECIMAL AS LINE COORD
4	FMDLINS	610	76	2	3	37	1	SYLLABUS..DECIMAL AS LINE COORD
4	FMDLINU	610	76	3	3	38	1	UNDERSTAND..DECIMAL AS LINE COORD
4	FMDLINL	610	76	4	3	39	1	LIKED..DECIMAL AS LINE COORD
4	FMDLINR	610	76	5	3	40	1	RELATED..DECIMAL AS LINE COORD
4	FMDLINF	610	76	6	3	41	1	FUTURE..DECIMAL AS LINE COORD
4	FMDLINH	610	76	7	3	42	1	HARD..DECIMAL AS LINE COORD
4	FMDLINX	610	76	8	3	43	1	TEXT EMPHASIS..DECIMAL AS LINE COORD
4	FMDFRCE	610	78		3	44	1	EMPHASIZED..DECIMAL AS FRACTION
4	FMDFRCT	610	79		3	45	1	IN TEXT..DECIMAL AS FRACTION
4	FMDFRCK	610	80	1	3	46	1	KNOWN..DECIMAL AS FRACTION
4	FMDFRCS	610	80	2	3	47	1	SYLLABUS..DECIMAL AS FRACTION
4	FMDFRCU	610	80	3	3	48	1	UNDERSTAND..DECIMAL AS FRACTION
4	FMDFRCL	610	80	4	3	49	1	LIKED..DECIMAL AS FRACTION
4	FMDFRCR	610	80	5	3	50	1	RELATED..DECIMAL AS FRACTION
4	FMDFRCF	610	80	6	3	51	1	FUTURE..DECIMAL AS FRACTION
4	FMDFRCH	610	80	7	3	52	1	HARD..DECIMAL AS FRACTION
4	FMDFRCX	610	80	8	3	53	1	TEXT EMPHASIS..DECIMAL AS FRACTION

4	FMDREGE	610	82	3	54	1	EMPHASIZED..DECIMAL OF A REGION	
4	FMDREGT	610	83	3	55	1	IN TEXT..DECIMAL OF A REGION	
4	FMDREGK	610	84	1	3	56	1	KNOWN..DECIMAL OF A REGION
4	FMDREGS	610	84	2	3	57	1	SYLLABUS..DECIMAL OF A REGION
4	FMDREGU	610	84	3	3	58	1	UNDERSTAND..DECIMAL OF A REGION
4	FMDREGL	610	84	4	3	59	1	LIKED..DECIMAL OF A REGION
4	FMDREGR	610	84	5	3	60	1	RELATED..DECIMAL OF A REGION
4	FMDREGF	610	84	6	3	61	1	FUTURE..DECIMAL OF A REGION
4	FMDREGH	610	84	7	3	62	1	HARD..DECIMAL OF A REGION
4	FMDREGX	610	84	8	3	63	1	TEXT EMPHASIS..DECIMAL OF A REGION
4	FMDPLVE	610	86	3	64	1	EMPHASIZED..DECIMAL AS PLACE VALUE	
4	FMDPLVT	610	87	3	65	1	IN TEXT..DECIMAL AS PLACE VALUE	
4	FMDPLVK	610	88	1	3	66	1	KNOWN..DECIMAL AS PLACE VALUE
4	FMDPLVS	610	88	2	3	67	1	SYLLABUS..DECIMAL AS PLACE VALUE
4	FMDPLVU	610	88	3	3	68	1	UNDERSTAND..DECIMAL AS PLACE VALUE
4	FMDPLVL	610	88	4	3	69	1	LIKED..DECIMAL AS PLACE VALUE
4	FMDPLVR	610	88	5	3	70	1	RELATED..DECIMAL AS PLACE VALUE
4	FMDPLVF	610	88	6	3	71	1	FUTURE..DECIMAL AS PLACE VALUE
4	FMDPLVH	610	88	7	3	72	1	HARD..DECIMAL AS PLACE VALUE
4	FMDPLVX	610	88	8	3	73	1	TEXT EMPHASIS..DECIMAL AS PLACE VALUE
4	FMDSERE	610	90	4	20	1	EMPHASIZED..DECIMAL AS A SERIES	
4	FMDSERT	610	91	4	21	1	IN TEXT..DECIMAL AS A SERIES	
4	FMDSERK	610	92	1	4	22	1	KNOWN..DECIMAL AS A SERIES
4	FMDSERS	610	92	2	4	23	1	SYLLABUS..DECIMAL AS A SERIES
4	FMDSERU	610	92	3	4	24	1	UNDERSTAND..DECIMAL AS A SERIES
4	FMDSERL	610	92	4	4	25	1	LIKED..DECIMAL AS A SERIES
4	FMDSERR	610	92	5	4	26	1	RELATED..DECIMAL AS A SERIES
4	FMDSERF	610	92	6	4	27	1	FUTURE..DECIMAL AS A SERIES
4	FMDSERH	610	92	7	4	28	1	HARD..DECIMAL AS A SERIES
4	FMDSERX	610	92	8	4	29	1	TEXT EMPHASIS..DECIMAL AS A SERIES
4	FMDCMPE	610	94	4	30	1	EMPHASIZED..DECIMAL AS A COMPARISON	
4	FMDCMPT	610	95	4	31	1	IN TEXT..DECIMAL AS A COMPARISON	
4	FMDCMPK	610	96	1	4	32	1	KNOWN..DECIMAL AS A COMPARISON
4	FMDCMPS	610	96	2	4	33	1	SYLLABUS..DECIMAL AS A COMPARISON
4	FMDCMPU	610	96	3	4	34	1	UNDERSTAND..DECIMAL AS A COMPARISON
4	FMDCMPL	610	96	4	4	35	1	LIKED..DECIMAL AS A COMPARISON
4	FMDCMPR	610	96	5	4	36	1	RELATED..DECIMAL AS A COMPARISON
4	FMDCMPF	610	96	6	4	37	1	FUTURE..DECIMAL AS A COMPARISON
4	FMDCMPH	610	96	7	4	38	1	HARD..DECIMAL AS A COMPARISON
4	FMDCMPX	610	96	8	4	39	1	TEXT EMPHASIS..DECIMAL AS A COMPARISON
4	FMODFRC	610	98	4	40	1	DECIMAL OP..RELATE TO FRACTION	
4	FMODWHL	610	99	4	41	1	DECIMAL OP..RELATE TO WHOLE NUMBERS	
4	FMODMAT	610	100	4	42	1	DECIMAL OP..CONCRETE MATERIALS	
4	FPSIZE	610	101	4	43	3	AVERAGE LENGTH OF MATH PERIOD MINUTES	
4	FPFTOT	610	102	4	46	3	FRACTION TIME..TOTAL CLASS PERIODS	
4	FPFCNPT	610	103	4	49	2	FRACTION TIME..DEVELOPING THE CONCEPT	
4	FPFEQU	610	104	4	51	2	FRACTION TIME..FINDING EQUIVALENTS	
4	FPFADD	610	105	4	53	2	FRACTION TIME..ADDING AND SUBTRACTING	
4	FPFMUL	610	106	4	55	2	FRACTION TIME..MULTIPLYING	
4	FPFDIV	610	107	4	57	2	FRACTION TIME..DIVIDING	
4	FPFORD	610	108	4	59	2	FRACTION TIME..ORDERING	
4	FPFPROB	610	109	4	61	2	FRACTION TIME..APPLICATIONS PROBLEMS	
4	FPDTOT	610	110	4	63	3	DECIMAL TIME..TOTAL CLASS PERIODS	
4	FPDCNPT	610	111	4	66	2	DECIMAL TIME..DEVELOPING THE CONCEPT	
4	FPDCNV	610	112	4	68	2	DECIMAL TIME..CONVERT DECIMAL COMMON	
4	FPDADD	610	113	4	70	2	DECIMAL TIME..ADDING AND SUBTRACTING	
4	FPDMUL	610	114	4	72	2	DECIMAL TIME..MULTIPLYING	
4	FPDDIV	610	115	4	74	2	DECIMAL TIME..DIVIDING	
4	FPDORD	610	116	4	76	2	DECIMAL TIME..ORDERING	
4	FPDPROB	610	117	4	78	2	DECIMAL TIME..APPLICATIONS PROBLEMS	
4	FOFCOMP	610	118	4	80	1	OPINION..TEACH COMMON FRACT COMPUTATION	

4	FOSKILL	610	119	5	20	1	OPINION..SKILL INDICATES UNDERSTANDING
4	FOFDEL	610	120	5	21	1	OPINION..DELAY COMMON FRACTIONS
4	FOCALC	610	121	5	22	1	OPINION..COMPUTE WITH CALCULATOR
4	FOFSMAL	610	122	5	23	1	OPINION..TEACH WITH SMALL DENOMINATORS
4	FODRILL	610	123	5	24	1	OPINION..IMPORTANT TO DRILL COMPUTATION
4	FORULES	610	124	5	25	1	OPINION..RULES SHOULD BE MEMORIZED
4	FOAPPL	610	125	5	26	1	OPINION..PLACE EMPHASIS ON APPLICATONS
4	FOPROB	610	126	5	27	1	OPINION..MORE EMPHASIS PROBLEM SOLVING
4	FOFSTRC	610	127	5	28	1	OPINION..EMPHASIZE STRUCTURAL PROPERTIES
4	FOESTIM	610	128	5	29	1	OPINION..ESTIMATION ETC. MORE IMPORTANT
4	FODEC	610	129	5	30	1	OPINION..DECIMALS MORE THAN COMMON
4	FOMENT	610	130	5	31	1	OPINION..EMPHASIZE MENTAL CALCULATION
4	FOOCDF	610	131	5	32	1	OPINION..COMMON FRACTIONS BEFORE DECIMAL
4	FOOAMF	610	132	5	33	1	OPINION..ADD BEFORE MULTIPLY COMMON
4	FOLCM	610	133	5	34	1	OPINION..KNOW LEAST COMMON MULTIPLE
4	FOGCF	610	134	5	35	1	OPINION..KNOW GREATEST COMMON FACTOR
4	FOFRDUC	610	135	5	36	1	OPINION..REDUCE FRACTION WITH GCF
4	RSTEXT	611	1	1	20	1	USE OF..STUDENT TEXTBOOK
4	RSOTEXT	611	2	1	21	1	USE OF..OTHER PUBLISHED TEXT MATERIALS
4	RSLOCAL	611	3	1	22	1	USE OF..LOCALLY PRODUCED TEXT MATERIALS
4	RSINDIV	611	4	1	23	1	USE OF..INDIVIDUALIZED MATERIALS
4	RSFILM	611	5	1	24	1	USE OF..FILMS, FILMSTRIPS, MODELS
4	RSLAB	611	6	1	25	1	USE OF..LABORATORY MATERIALS
4	RTRATIO	611	7	1	26	1	TOPIC..THE CONCEPT OF RATIO
4	RTPROP	611	8	1	27	1	TOPIC..THE CONCEPT OF PROPORTION
4	RTPREQU	611	9	1	28	1	TOPIC..SOLVING PROPORTIONAL EQUATIONS
4	RTPCT	611	10	1	29	1	TOPIC..THE CONCEPT OF PERCENT
4	RTCOMP	611	11	1	30	1	TOPIC..COMPUTING PERCENTS
4	RTCHGPF	611	12	1	31	1	TOPIC..CHANGE PCTS TO COMMON FRACTIONS
4	RTCHGPD	611	13	1	32	1	TOPIC..CHANGE PCTS TO DECIMAL FRACTIONS
4	RTCHGFP	611	14	1	33	1	TOPIC..CHANGE COMMON FRACTIONS TO PCTS
4	RTCHGDP	611	15	1	34	1	TOPIC..CHANGE DECIMAL FRACTIONS TO PCTS
4	RTBIGP	611	16	1	35	1	TOPIC..PERCENTS GREATER THAN 100
4	RTSMAP	611	17	1	36	1	TOPIC..PERCENTS LESS THAN 1
4	RMRRATE	611	18	1	37	1	INTERPRETATION..RATIO AS A RATE
4	RMRCOMP	611	19	1	38	1	INTERPRETATION..RATIO AS A COMPARISON
4	RMRFRAC	611	20	1	39	1	INTERPRETATION..RATIO AS A FRACTION
4	RMRQUOT	611	21	1	40	1	INTERPRETATION..RATIO AS A QUOTIENT
4	RMPFRAC	611	22	1	41	1	INTERPRETATION..PERCENT AS A FRACTION
4	RMPRATO	611	23	1	42	1	INTERPRETATION..PERCENT AS A RATIO
4	RMPEQRE	611	24	1	43	1	EMPHASIZED..PROPS AS EQUIV RATIOS
4	RMPEQRT	611	25	1	44	1	IN TEXT..PROPS AS EQUIV RATIOS
4	RMPEQRK	611	26	1	45	1	KNOWN..PROPS AS EQUIV RATIOS
4	RMPEQRS	611	26	2	46	1	SYLLABUS..PROPS AS EQUIV RATIOS
4	RMPEQRU	611	26	3	47	1	UNDERSTAND..PROPS AS EQUIV RATIOS
4	RMPEQRL	611	26	4	48	1	LIKED..PROPS AS EQUIV RATIOS
4	RMPEQRR	611	26	5	49	1	RELATED..PROPS AS EQUIV RATIOS
4	RMPEQRF	611	26	6	50	1	FUTURE..PROPS AS EQUIV RATIOS
4	RMPEQRH	611	26	7	51	1	HARD..PROPS AS EQUIV RATIOS
4	RMPEQRX	611	26	8	52	1	TEXT EMPHASIS..PROPS AS EQUIV RATIOS
4	RMPEQCE	611	28	1	53	1	EMPHASIZED..PROPS AS EQUIV COMPS
4	RMPEQCT	611	29	1	54	1	IN TEXT..PROPS AS EQUIV COMPS
4	RMPEQCK	611	30	1	55	1	KNOWN..PROPS AS EQUIV COMPS
4	RMPEQCS	611	30	2	56	1	SYLLABUS..PROPS AS EQUIV COMPS
4	RMPEQCU	611	30	3	57	1	UNDERSTAND..PROPS AS EQUIV COMPS
4	RMPEQCL	611	30	4	58	1	LIKED..PROPS AS EQUIV COMPS
4	RMPEQCR	611	30	5	59	1	RELATED..PROPS AS EQUIV COMPS
4	RMPEQCF	611	30	6	60	1	FUTURE..PROPS AS EQUIV COMPS
4	RMPEQCH	611	30	7	61	1	HARD..PROPS AS EQUIV COMPS
4	RMPEQCX	611	30	8	62	1	TEXT EMPHASIS..PROPS AS EQUIV COMPS
4	RMPEQFE	611	32	1	63	1	EMPHASIZED..PROPS AS EQUIV FRACTIONS

4	RMPEQFT	611	33	1	64	1	IN TEXT..PROPS AS EQUIV FRACTIONS	
4	RMPEQFK	611	34	1	1	65	1	KNOWN..PROPS AS EQUIV FRACTIONS
4	RMPEQFS	611	34	2	1	66	1	SYLLABUS..PROPS AS EQUIV FRACTIONS
4	RMPEQFU	611	34	3	1	67	1	UNDERSTAND..PROPS AS EQUIV FRACTIONS
4	RMPEQFL	611	34	4	1	68	1	LIKED..PROPS AS EQUIV FRACTIONS
4	RMPEQFR	611	34	5	1	69	1	RELATED..PROPS AS EQUIV FRACTIONS
4	RMPEQFF	611	34	6	1	70	1	FUTURE..PROPS AS EQUIV FRACTIONS
4	RMPEQFH	611	34	7	1	71	1	HARD..PROPS AS EQUIV FRACTIONS
4	RMPEQFX	611	34	8	1	72	1	TEXT EMPHASIS..PROPS AS EQUIV FRACTIONS
4	RMPEQQE	611	36	2	20	1	EMPHASIZED..PROPS AS EQUIV QUOTIENTS	
4	RMPEQQT	611	37	2	21	1	IN TEXT..PROPS AS EQUIV QUOTIENTS	
4	RMPEQQK	611	38	1	2	22	1	KNOWN..PROPS AS EQUIV QUOTIENTS
4	RMPEQQS	611	38	2	2	23	1	SYLLABUS..PROPS AS EQUIV QUOTIENTS
4	RMPEQQU	611	38	3	2	24	1	UNDERSTAND..PROPS AS EQUIV QUOTIENTS
4	RMPEQQL	611	38	4	2	25	1	LIKED..PROPS AS EQUIV QUOTIENTS
4	RMPEQQR	611	38	5	2	26	1	RELATED..PROPS AS EQUIV QUOTIENTS
4	RMPEQQF	611	38	6	2	27	1	FUTURE..PROPS AS EQUIV QUOTIENTS
4	RMPEQQH	611	38	7	2	28	1	HARD..PROPS AS EQUIV QUOTIENTS
4	RMPEQQX	611	38	8	2	29	1	TEXT EMPHASIS..PROPS AS EQUIV QUOTIENTS
4	RMSPMUL	611	40	2	30	1	PROP PROC..MULTIPLY OR DIVIDE TO EQUATE	
4	RMSPXP	611	41	2	31	1	PROP PROC..FIND THE CROSS PRODUCTS	
4	RMSPDIV	611	42	2	32	1	PROP PROC..DIVIDE THE TERMS OF ONE RATIO	
4	RMSPSYM	611	43	2	33	1	SYMBOLIC NUMERIC IN PROP EQUATIONS	
4	RAPRSN	611	44	2	34	1	PROP METHOD..PROPORTIONAL REASONING	
4	RAPREQU	611	45	2	35	1	PROP METHOD..A PROPORTIONAL EQUATION	
4	RAUNIT	611	46	2	36	1	PROP METHOD..UNIT METHOD	
4	RAMODEL	611	47	2	37	1	RAT PROP APPL..SCALE MODELS	
4	RAMAP	611	48	2	38	1	RAT PROP APPL..DISTANCES FROM MAPS	
4	RADRAW	611	49	2	39	1	RAT PROP APPL..SCALE DRAWINGS	
4	RASAMP	611	50	2	40	1	RAT PROP APPL..SIZE OF POP FROM SAMPLE	
4	RACOST	611	51	2	41	1	RAT PROP APPL..BUYING DECISIONS COST	
4	RAMIX	611	52	2	42	1	RAT PROP APPL..MIXTURE OR RECIPE	
4	RARWTRI	611	53	2	43	1	RAT PROP APPL..REAL WORLD TRIANGLES	
4	RACOMM	611	54	2	44	1	RAT PROP APPL..COMMISSION	
4	RADISC	611	55	2	45	1	RAT PROP APPL..DISCOUNT	
4	RAWP	611	56	2	46	1	RAT PROP APPL..GENERAL WORD PROBLEMS	
4	RAINST	611	57	2	47	1	RAT PROP APPL..SIMPLE COMPOUND INTEREST	
4	RAINCRS	611	58	2	48	1	RAT PROP APPL..PCT INCREASE OR DECREASE	
4	RAGRAPH	611	59	2	49	1	RAT PROP APPL..CIRCLE OR BAR GRAPHS	
4	RUTEXT	611	60	2	50	1	PROBLEM SOURCE..STUDENT TEXTBOOK	
4	RUSTEXT	611	61	2	51	1	PROBLEM SOURCE..SUPPLEMENTARY BOOKS	
4	RULOCAL	611	62	2	52	1	PROBLEM SOURCE..LOCAL MATERIALS	
4	RUGUIDE	611	63	2	53	1	PROBLEM SOURCE..GUIDE OR SYLLABUS	
4	RUPPUB	611	64	2	54	1	PROBLEM SOURCE..PROF. ASSN. PUBLICATIONS	
4	RUSTDS	611	65	2	55	1	PROBLEM SOURCE..STUDENT SUGGESTIONS	
4	RUREALW	611	66	2	56	1	PROBLEM SOURCE..REAL WORLD	
4	RMPPEQ1	611	67	2	57	1	TYPE 1 PCT PROBLEMS..EQUATION METHOD	
4	RMPPPR1	611	68	2	58	1	TYPE 1 PCT PROBLEMS..PROPORTION METHOD	
4	RMPPAR1	611	69	2	59	1	TYPE 1 PCT PROBLEMS..ARITHMETIC METHOD	
4	RMPPUN1	611	70	2	60	1	TYPE 1 PCT PROBLEMS..UNIT METHOD	
4	RMPPEQ2	611	71	2	61	1	TYPE 2 PCT PROBLEMS..EQUATION METHOD	
4	RMPPPR2	611	72	2	62	1	TYPE 2 PCT PROBLEMS..PROPORTION METHOD	
4	RMPPAR2	611	73	2	63	1	TYPE 2 PCT PROBLEMS..ARITHMETIC METHOD	
4	RMPPUN2	611	74	2	64	1	TYPE 2 PCT PROBLEMS..UNIT METHOD	
4	RMPPEQ3	611	75	2	65	1	TYPE 3 PCT PROBLEMS..EQUATION METHOD	
4	RMPPPR3	611	76	2	66	1	TYPE 3 PCT PROBLEMS..PROPORTION METHOD	
4	RMPPAR3	611	77	2	67	1	TYPE 3 PCT PROBLEMS..ARITHMETIC METHOD	
4	RMPPUN3	611	78	2	68	1	TYPE 3 PCT PROBLEMS..UNIT METHOD	
4	RPSIZE	611	79	2	69	3	AVERAGE LENGTH OF MATH PERIOD MINUTES	
4	RPTOTAL	611	80	2	72	3	PERIODS..TOTAL ON RATIO PROPORTION PCT	
4	RPRATIO	611	81	2	75	2	PERIODS..DEVELOP CONCEPT OF RATIO	

4	RPPROP	611	82	2	77	2	PERIODS..DEVELOP CONCEPT OF PROPORTION
4	RPPREQU	611	83	2	79	2	PERIODS..SOLVING PROPORTIONAL EQUATIONS
4	RPRAPPL	611	84	3	20	2	PERIODS..APPLICATIONS RATIO PROPORTION
4	RPPCT	611	85	3	22	2	PERIODS..DEVELOP CONCEPT OF PERCENT
4	RPCOMP	611	86	3	24	2	PERIODS..COMPUTING WITH PERCENT
4	RPCHGPF	611	87	3	26	2	PERIODS..CHANGE PCTS TO COMMON FRACTIONS
4	RPCHGPD	611	88	3	28	2	PERIODS..CHANGE PCTS TO DEC FRACTIONS
4	RPCHGFP	611	89	3	30	2	PERIODS..CHANGE COMMON FRACTIONS TO PCTS
4	RPCHGDP	611	90	3	32	2	PERIODS..CHANGE DEC FRACTIONS TO PCTS
4	RPPAPPL	611	91	3	34	2	PERIODS..APPLICATIONS PERCENT
4	RORELAT	611	92	3	36	1	OPINION..RELATE PERCENT TO PROPORTION
4	ROOPRP	611	93	3	37	1	OPINION..PERCENT BEFORE RATIO PROPORTION
4	RODELLE	611	94	3	38	1	OPINION..DELAY PROPORTION TIL LINEAR EQ
4	RODELP	611	95	3	39	1	OPINION..DELAY PROPORTION PAST GRADE
4	ROARITH	611	96	3	40	1	OPINION..USE ARITHMETIC METHOD INITIALLY
4	ROSKILL	611	97	3	41	1	OPINION..SKILL INDICATES UNDERSTANDING
4	ROIDENT	611	98	3	42	1	OPINION..IDENTIFY TYPES OF PCT PROBLEMS
4	ROSPEC	611	99	3	43	1	OPINION..SPECIFIC PROC EACH PCT TYPE
4	ROCALC	611	100	3	44	1	OPINION..COMPUTE PERCENT WITH CALCULATOR
4	ROAPPL	611	101	3	45	1	OPINION..APPLICATIONS MORE THAN PROP EQ
4	ROCNSMR	611	102	3	46	1	OPINION..EMPHASIZE CONSUMER APPLICATIONS
4	ROFRAC	611	103	3	47	1	OPINION..TEACH RATIO AS FRACTIONS
4	MSTEXT	612	1	1	20	1	USE OF..STUDENT TEXTBOOK
4	MSOTEXT	612	2	1	21	1	USE OF..OTHER PUBLISHED TEXT MATERIALS
4	MSLOCAL	612	3	1	22	1	USE OF..LOCALLY PRODUCED TEXT MATERIALS
4	MSINDIV	612	4	1	23	1	USE OF..INDIVIDUALIZED MATERIALS
4	MSFILM	612	5	1	24	1	USE OF..FILMS, FILMSTRIPS, MODELS
4	MSLAB	612	6	1	25	1	USE OF..LABORATORY MATERIALS
4	MTCNCPT	612	7	1	26	1	TOPIC..CONCEPT OF MEASUREMENT
4	MTMET	612	8	1	27	1	TOPIC..NAMES OF METRIC UNITS
4	MTENG	612	9	1	28	1	TOPIC..NAMES OF ENGLISH UNITS
4	MTCONVW	612	10	1	29	1	TOPIC..CONVERSION WITHIN A SYSTEM
4	MTCONVB	612	11	1	30	1	TOPIC..CONVERSION BETWEEN SYSTEMS
4	MTESTIM	612	12	1	31	1	TOPIC..ESTIMATING MEASUREMENTS
4	MTOPER	612	13	1	32	1	TOPIC..OPERATIONS WITH MEASUREMENTS
4	MTPREC	612	14	1	33	1	TOPIC..PRECISION, ACCURACY, ERROR
4	MTPI	612	15	1	34	1	TOPIC..CONCEPT OF PI
4	MTLINM	612	16	1	35	1	TOPIC..LINEAR MEASUREMENT
4	MTPPOLY	612	17	1	36	1	TOPIC..PERIMETER OF POLYGONS
4	MTCCIRC	612	18	1	37	1	TOPIC..CIRCUMFERENCE OF A CIRCLE
4	MTATRI	612	19	1	38	1	TOPIC..AREA OF A TRIANGLE
4	MTARECT	612	20	1	39	1	TOPIC..AREA OF RECTANGLES
4	MTAPARA	612	21	1	40	1	TOPIC..AREA OF PARALLELOGRAMS
4	MTATRAP	612	22	1	41	1	TOPIC..AREA OF A TRAPEZOID
4	MTACIRC	612	23	1	42	1	TOPIC..AREA OF A CIRCLE
4	MTSRECT	612	24	1	43	1	TOPIC..SURFACE AREA OF RECT SOLIDS
4	MTSCYLN	612	25	1	44	1	TOPIC..SURFACE AREA OF CYLINDERS
4	MTSSPH	612	26	1	45	1	TOPIC..SURFACE AREA OF SPHERES
4	MTVRECT	612	27	1	46	1	TOPIC..VOLUME OF RECTANGULAR SOLIDS
4	MTVCYLN	612	28	1	47	1	TOPIC..VOLUME OF CYLINDERS AND PRISMS
4	MTVSPH	612	29	1	48	1	TOPIC..VOLUME OF SPHERES
4	MTVCONE	612	30	1	49	1	TOPIC..VOLUME OF CONES AND PYRAMIDS
4	MAIDRUL	612	31	1	50	1	AID USE..RULERS
4	MAIDTAP	612	32	1	51	1	AID USE..MEASURING TAPE
4	MAIDWHL	612	33	1	52	1	AID USE..TRUNDLE WHEEL
4	MAIDNSU	612	34	1	53	1	AID USE..NON-STANDARD UNITS
4	MAIDGEO	612	35	1	54	1	AID USE..GEOBOARDS GRAPH PAPER GRIDS
4	MAIDSU	612	36	1	55	1	AID USE..STANDARD UNITS FOR AREA
4	MAIDCYL	612	37	1	56	1	AID USE..GRADUATED CYLINDERS
4	MAIDCON	612	38	1	57	1	AID USE..CONTAINERS
4	MAIDMOD	612	39	1	58	1	AID USE..FILLABLE MODELS

4	MMNSU	612	40	1	59	1	UNITS METHOD..USE NON-STANDARD UNITS
4	MMSU	612	41	1	60	1	UNITS METHOD..MEASURE IN STANDARD UNITS
4	MRESTIM	612	42	1	61	1	UNITS METHOD..ESTIMATE SIZE OF OBJECTS
4	MMIDENT	612	43	1	62	1	UNITS METHOD..IDENTIFY OBJECTS OF A SIZE
4	MMDIFFU	612	44	1	63	1	UNITS METHOD..MEASURE IN DIFFERENT UNITS
4	MMSMALU	612	45	1	64	1	UNITS METHOD..MEASURE IN SMALLER UNITS
4	MMPCDE	612	46	1	65	1	EMPHASIZED..PI BY CIRCUM TO DIAMETER
4	MMPCDT	612	47	1	66	1	IN TEXT..PI BY CIRCUM TO DIAMETER
4	MMPCDK	612	48	1	67	1	KNOWN..PI BY CIRCUM TO DIAMETER
4	MMPCDS	612	48	2	68	1	SYLLABUS..PI BY CIRCUM TO DIAMETER
4	MMPCDU	612	48	3	69	1	UNDERSTAND..PI BY CIRCUM TO DIAMETER
4	MMPCDL	612	48	4	70	1	LIKED..PI BY CIRCUM TO DIAMETER
4	MMPCDR	612	48	5	71	1	RELATED..PI BY CIRCUM TO DIAMETER
4	MMPCDF	612	48	6	72	1	FUTURE..PI BY CIRCUM TO DIAMETER
4	MMPCDH	612	48	7	73	1	HARD..PI BY CIRCUM TO DIAMETER
4	MMPCDX	612	48	8	74	1	TEXT EMPHASIS..PI BY CIRCUM TO DIAMETER
4	MMP227E	612	50	2	20	1	EMPHASIZED..PI AS 22 7THS OR 3.14
4	MMP227T	612	51	2	21	1	IN TEXT..PI AS 22 7THS OR 3.14
4	MMP227K	612	52	1	22	1	KNOWN..PI AS 22 7THS OR 3.14
4	MMP227S	612	52	2	23	1	SYLLABUS..PI AS 22 7THS OR 3.14
4	MMP227U	612	52	3	24	1	UNDERSTAND..PI AS 22 7THS OR 3.14
4	MMP227L	612	52	4	25	1	LIKED..PI AS 22 7THS OR 3.14
4	MMP227R	612	52	5	26	1	RELATED..PI AS 22 7THS OR 3.14
4	MMP227F	612	52	6	27	1	FUTURE..PI AS 22 7THS OR 3.14
4	MMP227H	612	52	7	28	1	HARD..PI AS 22 7THS OR 3.14
4	MMP227X	612	52	8	29	1	TEXT EMPHASIS..PI AS 22 7THS OR 3.14
4	MMPBUFE	612	54	2	30	1	EMPHASIZED..PI BY BUFFONS NEEDLE
4	MMPBUFT	612	55	2	31	1	IN TEXT..PI BY BUFFONS NEEDLE
4	MMPBUFK	612	56	1	32	1	KNOWN..PI BY BUFFONS NEEDLE
4	MMPBUFS	612	56	2	33	1	SYLLABUS..PI BY BUFFONS NEEDLE
4	MMPBUFU	612	56	3	34	1	UNDERSTAND..PI BY BUFFONS NEEDLE
4	MMPBUFL	612	56	4	35	1	LIKED..PI BY BUFFONS NEEDLE
4	MMPBUFR	612	56	5	36	1	RELATED..PI BY BUFFONS NEEDLE
4	MMPBUFF	612	56	6	37	1	FUTURE..PI BY BUFFONS NEEDLE
4	MMPBUFH	612	56	7	38	1	HARD..PI BY BUFFONS NEEDLE
4	MMPBUFX	612	56	8	39	1	TEXT EMPHASIS..PI BY BUFFONS NEEDLE
4	MMPCHRE	612	58	2	40	1	EMPHASIZED..PI BY CHART OF RATIOS
4	MMPCHRT	612	59	2	41	1	IN TEXT..PI BY CHART OF RATIOS
4	MMPCHRK	612	60	1	42	1	KNOWN..PI BY CHART OF RATIOS
4	MMPCHRS	612	60	2	43	1	SYLLABUS..PI BY CHART OF RATIOS
4	MMPCHRU	612	60	3	44	1	UNDERSTAND..PI BY CHART OF RATIOS
4	MMPCHRL	612	60	4	45	1	LIKED..PI BY CHART OF RATIOS
4	MMPCHRR	612	60	5	46	1	RELATED..PI BY CHART OF RATIOS
4	MMPCHRF	612	60	6	47	1	FUTURE..PI BY CHART OF RATIOS
4	MMPCHRH	612	60	7	48	1	HARD..PI BY CHART OF RATIOS
4	MMPCHRX	612	60	8	49	1	TEXT EMPHASIS..PI BY CHART OF RATIOS
4	MMPNUME	612	62	2	50	1	EMPHASIZED..PI AS IRRATIONAL NUMBER
4	MMPNUMT	612	63	2	51	1	IN TEXT..PI AS IRRATIONAL NUMBER
4	MMPNUMK	612	64	1	52	1	KNOWN..PI AS IRRATIONAL NUMBER
4	MMPNUMS	612	64	2	53	1	SYLLABUS..PI AS IRRATIONAL NUMBER
4	MMPNUMU	612	64	3	54	1	UNDERSTAND..PI AS IRRATIONAL NUMBER
4	MMPNUML	612	64	4	55	1	LIKED..PI AS IRRATIONAL NUMBER
4	MMPNUMR	612	64	5	56	1	RELATED..PI AS IRRATIONAL NUMBER
4	MMPNUMF	612	64	6	57	1	FUTURE..PI AS IRRATIONAL NUMBER
4	MMPNUMH	612	64	7	58	1	HARD..PI AS IRRATIONAL NUMBER
4	MMPNUMX	612	64	8	59	1	TEXT EMPHASIS..PI AS IRRATIONAL NUMBER
4	MMPPOLE	612	66	2	60	1	EMPHASIZED..PI BY INSCRIBED POLYGONS
4	MMPPOLT	612	67	2	61	1	IN TEXT..PI BY INSCRIBED POLYGONS
4	MMPPOLK	612	68	1	62	1	KNOWN..PI BY INSCRIBED POLYGONS
4	MMPPOLS	612	68	2	63	1	SYLLABUS..PI BY INSCRIBED POLYGONS
4	MMPPOLU	612	68	3	64	1	UNDERSTAND..PI BY INSCRIBED POLYGONS

4	MMPOLL	612	68	4	2	65	1	LIKED..PI BY INSCRIBED POLYGONS
4	MMPPOLR	612	68	5	2	66	1	RELATED..PI BY INSCRIBED POLYGONS
4	MMPPOLF	612	68	6	2	67	1	FUTURE..PI BY INSCRIBED POLYGONS
4	MMPPOLH	612	68	7	2	68	1	HARD..PI BY INSCRIBED POLYGONS
4	MMPPOLX	612	68	8	2	69	1	TEXT EMPHASIS..PI BY INSCRIBED POLYGONS
4	MMPONEE	612	70		2	70	1	EMPHASIZED..PI BY CIRCLE RADIUS ONE
4	MMPONET	612	71		2	71	1	IN TEXT..PI BY CIRCLE RADIUS ONE
4	MMPONEK	612	72	1	2	72	1	KNOWN..PI BY CIRCLE RADIUS ONE
4	MMPONES	612	72	2	2	73	1	SYLLABUS..PI BY CIRCLE RADIUS ONE
4	MMPONEU	612	72	3	2	74	1	UNDERSTAND..PI BY CIRCLE RADIUS ONE
4	MMPONEL	612	72	4	2	75	1	LIKED..PI BY CIRCLE RADIUS ONE
4	MMPONER	612	72	5	2	76	1	RELATED..PI BY CIRCLE RADIUS ONE
4	MMPONEF	612	72	6	2	77	1	FUTURE..PI BY CIRCLE RADIUS ONE
4	MMPONEH	612	72	7	2	78	1	HARD..PI BY CIRCLE RADIUS ONE
4	MMPONEX	612	72	8	2	79	1	TEXT EMPHASIS..PI BY CIRCLE RADIUS ONE
4	MMAFORE	612	74		3	20	1	EMPHASIZED..AREA BY FORMULA
4	MMAFORT	612	75		3	21	1	IN TEXT..AREA BY FORMULA
4	MMAFORK	612	76	1	3	22	1	KNOWN..AREA BY FORMULA
4	MMAFORS	612	76	2	3	23	1	SYLLABUS..AREA BY FORMULA
4	MMAFORU	612	76	3	3	24	1	UNDERSTAND..AREA BY FORMULA
4	MMAFORL	612	76	4	3	25	1	LIKED..AREA BY FORMULA
4	MMAFORR	612	76	5	3	26	1	RELATED..AREA BY FORMULA
4	MMAFORF	612	76	6	3	27	1	FUTURE..AREA BY FORMULA
4	MMAFORH	612	76	7	3	28	1	HARD..AREA BY FORMULA
4	MMAFORX	612	76	8	3	29	1	TEXT EMPHASIS..AREA BY FORMULA
4	MMAGBAE	612	78		3	30	1	EMPHASIZED..AREA BY GRID BASE ALT
4	MMAGBAT	612	79		3	31	1	IN TEXT..AREA BY GRID BASE ALT
4	MMAGBAK	612	80	1	3	32	1	KNOWN..AREA BY GRID BASE ALT
4	MMAGBAS	612	80	2	3	33	1	SYLLABUS..AREA BY GRID BASE ALT
4	MMAGBAU	612	80	3	3	34	1	UNDERSTAND..AREA BY GRID BASE ALT
4	MMAGBAL	612	80	4	3	35	1	LIKED..AREA BY GRID BASE ALT
4	MMAGBAR	612	80	5	3	36	1	RELATED..AREA BY GRID BASE ALT
4	MMAGBAF	612	80	6	3	37	1	FUTURE..AREA BY GRID BASE ALT
4	MMAGBAH	612	80	7	3	38	1	HARD..AREA BY GRID BASE ALT
4	MMAGBAX	612	80	8	3	39	1	TEXT EMPHASIS..AREA BY GRID BASE ALT
4	MMAGTRE	612	82		3	40	1	EMPHASIZED..AREA BY GRID TRIANGLES
4	MMAGTRT	612	83		3	41	1	IN TEXT..AREA BY GRID TRIANGLES
4	MMAGTRK	612	84	1	3	42	1	KNOWN..AREA BY GRID TRIANGLES
4	MMAGTRS	612	84	2	3	43	1	SYLLABUS..AREA BY GRID TRIANGLES
4	MMAGTRU	612	84	3	3	44	1	UNDERSTAND..AREA BY GRID TRIANGLES
4	MMAGTRL	612	84	4	3	45	1	LIKED..AREA BY GRID TRIANGLES
4	MMAGTRR	612	84	5	3	46	1	RELATED..AREA BY GRID TRIANGLES
4	MMAGTRF	612	84	6	3	47	1	FUTURE..AREA BY GRID TRIANGLES
4	MMAGTRH	612	84	7	3	48	1	HARD..AREA BY GRID TRIANGLES
4	MMAGTRX	612	84	8	3	49	1	TEXT EMPHASIS..AREA BY GRID TRIANGLES
4	MMARECE	612	86		3	50	1	EMPHASIZED..AREA BY COMP RECTANGLE
4	MMARECT	612	87		3	51	1	IN TEXT..AREA BY COMP RECTANGLE
4	MMARECK	612	88	1	3	52	1	KNOWN..AREA BY COMP RECTANGLE
4	MMARECS	612	88	2	3	53	1	SYLLABUS..AREA BY COMP RECTANGLE
4	MMARECU	612	88	3	3	54	1	UNDERSTAND..AREA BY COMP RECTANGLE
4	MMARECL	612	88	4	3	55	1	LIKED..AREA BY COMP RECTANGLE
4	MMARECR	612	88	5	3	56	1	RELATED..AREA BY COMP RECTANGLE
4	MMARECF	612	88	6	3	57	1	FUTURE..AREA BY COMP RECTANGLE
4	MMARECH	612	88	7	3	58	1	HARD..AREA BY COMP RECTANGLE
4	MMARECX	612	88	8	3	59	1	TEXT EMPHASIS..AREA BY COMP RECTANGLE
4	MMACUTE	612	90		3	60	1	EMPHASIZED..AREA BY CUT TRIANGLES
4	MMACUTT	612	91		3	61	1	IN TEXT..AREA BY CUT TRIANGLES
4	MMACUTK	612	92	1	3	62	1	KNOWN..AREA BY CUT TRIANGLES
4	MMACUTS	612	92	2	3	63	1	SYLLABUS..AREA BY CUT TRIANGLES
4	MMACUTU	612	92	3	3	64	1	UNDERSTAND..AREA BY CUT TRIANGLES
4	MMACUTL	612	92	4	3	65	1	LIKED..AREA BY CUT TRIANGLES

4	MMACUTR	612	92	5	3	66	1	RELATED..AREA BY CUT TRIANGLES
4	MMACUTF	612	92	6	3	67	1	FUTURE..AREA BY CUT TRIANGLES
4	MMACUTH	612	92	7	3	68	1	HARD..AREA BY CUT TRIANGLES
4	MMACUTX	612	92	8	3	69	1	TEXT EMPHASIS..AREA BY CUT TRIANGLES
4	MMACTRE	612	94		3	70	1	EMPHASIZED..AREA BY CNGRNT TRIANGLES
4	MMACTRT	612	95		3	71	1	IN TEXT..AREA BY CNGRNT TRIANGLES
4	MMACTRK	612	96	1	3	72	1	KNOWN..AREA BY CNGRNT TRIANGLES
4	MMACTRS	612	96	2	3	73	1	SYLLABUS..AREA BY CNGRNT TRIANGLES
4	MMACTRU	612	96	3	3	74	1	UNDERSTAND..AREA BY CNGRNT TRIANGLES
4	MMACTRL	612	96	4	3	75	1	LIKED..AREA BY CNGRNT TRIANGLES
4	MMACTRR	612	96	5	3	76	1	RELATED..AREA BY CNGRNT TRIANGLES
4	MMACTRF	612	96	6	3	77	1	FUTURE..AREA BY CNGRNT TRIANGLES
4	MMACTRH	612	96	7	3	78	1	HARD..AREA BY CNGRNT TRIANGLES
4	MMACTRX	612	96	8	3	79	1	TEXT EMPHASIS..AREA BY CNGRNT TRIANGLES
4	MMAPARE	612	98		4	20	1	EMPHASIZED..AREA BY PARTITIONING
4	MMAPART	612	99		4	21	1	IN TEXT..AREA BY PARTITIONING
4	MMAPARK	612	100	1	4	22	1	KNOWN..AREA BY PARTITIONING
4	MMAPARS	612	100	2	4	23	1	SYLLABUS..AREA BY PARTITIONING
4	MMAPARU	612	100	3	4	24	1	UNDERSTAND..AREA BY PARTITIONING
4	MMAPARL	612	100	4	4	25	1	LIKED..AREA BY PARTITIONING
4	MMAPARR	612	100	5	4	26	1	RELATED..AREA BY PARTITIONING
4	MMAPARF	612	100	6	4	27	1	FUTURE..AREA BY PARTITIONING
4	MMAPARH	612	100	7	4	28	1	HARD..AREA BY PARTITIONING
4	MMAPARX	612	100	8	4	29	1	TEXT EMPHASIS..AREA BY PARTITIONING
4	MMASUBE	612	102		4	30	1	EMPHASIZED..AREA BY SUBT TRIANGLES
4	MMASUBT	612	103		4	31	1	IN TEXT..AREA BY SUBT TRIANGLES
4	MMASUBK	612	104	1	4	32	1	KNOWN..AREA BY SUBT TRIANGLES
4	MMASUBS	612	104	2	4	33	1	SYLLABUS..AREA BY SUBT TRIANGLES
4	MMASUBU	612	104	3	4	34	1	UNDERSTAND..AREA BY SUBT TRIANGLES
4	MMASUBL	612	104	4	4	35	1	LIKED..AREA BY SUBT TRIANGLES
4	MMASUBR	612	104	5	4	36	1	RELATED..AREA BY SUBT TRIANGLES
4	MMASUBF	612	104	6	4	37	1	FUTURE..AREA BY SUBT TRIANGLES
4	MMASUBH	612	104	7	4	38	1	HARD..AREA BY SUBT TRIANGLES
4	MMASUBX	612	104	8	4	39	1	TEXT EMPHASIS..AREA BY SUBT TRIANGLES
4	MMVPFOR	612	106		4	40	1	PRISM METHOD..FORMULA
4	MMVPMOD	612	107		4	41	1	PRISM METHOD..PHYSICAL MODEL
4	MMVPBLD	612	108		4	42	1	PRISM METHOD..BUILD WITH UNIT CUBES
4	MMUNDEC	612	109		4	43	1	METRIC UNITS..ANALOGY WITH DECIMALS
4	MMUNCHG	612	110		4	44	1	METRIC UNITS..RULES TO CHANGE UNITS
4	MMUNTAB	612	111		4	45	1	METRIC UNITS..TABLE SHOWING DEFINITIONS
4	MMUNLIN	612	112		4	46	1	METRIC UNITS..NUMBER LINE OR METERSTICK
4	MMUNCUB	612	113		4	47	1	METRIC UNITS..CM AND DM CUBES
4	MMUNINS	612	114		4	48	1	METRIC UNITS..LENGTH CAPACITY MASS
4	MPSIZE	612	115		4	49	3	AVERAGE LENGTH OF MATH PERIOD MINUTES
4	MPTOTAL	612	116		4	52	3	PERIODS..TOTAL ON MEASUREMENT
4	MPCNCPT	612	117		4	55	2	PERIODS..CONCEPT OF MEASUREMENT
4	MPMET	612	118		4	57	2	PERIODS..UNITS IN THE METRIC SYSTEM
4	MPENG	612	119		4	59	2	PERIODS..UNITS IN THE ENGLISH SYSTEM
4	MPCONVW	612	120		4	61	2	PERIODS..CONVERSION WITHIN A SYSTEM
4	MPCONVB	612	121		4	63	2	PERIODS..CONVERSION BETWEEN SYSTEMS
4	MPESTIM	612	122		4	65	2	PERIODS..ESTIMATING MEASUREMENTS
4	MPPREC	612	123		4	67	2	PERIODS..PRECISION, ACCURACY, ERROR
4	MPOPER	612	124		4	69	2	PERIODS..OPERATIONS WITH MEASUREMENTS
4	MPPI	612	125		4	71	2	PERIODS..CONCEPT OF PI
4	MPLINM	612	126		4	73	2	PERIODS..LINEAR MEASUREMENT
4	MPPPOLY	612	127		4	75	2	PERIODS..PERIMETERS OF POLYGONS
4	MPCIRC	612	128		4	77	2	PERIODS..CIRCUMFERENCE OF CIRCLES
4	MPATRI	612	129		4	79	2	PERIODS..AREA OF TRIANGLES
4	MPARECT	612	130		5	20	2	PERIODS..AREA OF RECTANGLES
4	MPAPARA	612	131		5	22	2	PERIODS..AREA OF PARALLELOGRAMS
4	MPATRAP	612	132		5	24	2	PERIODS..AREA OF TRAPEZOIDS



4	MPACIRC	612	133	5	26	2	PERIODS..AREA OF CIRCLES
4	MPSRECT	612	134	5	28	2	PERIODS..SURFACE AREA OF RECT SOLIDS
4	MPSCYLN	612	135	5	30	2	PERIODS..SURFACE AREA OF CYLINDERS
4	MPSSPH	612	136	5	32	2	PERIODS..SURFACE AREA OF SPHERES
4	MPVRECT	612	137	5	34	2	PERIODS..VOLUME OF RECTANGULAR SOLIDS
4	MPVCYLN	612	138	5	36	2	PERIODS..VOLUME OF CYLINDERS AND PRISMS
4	MPVSPH	612	139	5	38	2	PERIODS..VOLUME OF SPHERES
4	MPVCONE	612	140	5	40	2	PERIODS..VOLUME OF CONES AND PYRAMIDS
4	MPAPPL	612	141	5	42	2	PERIODS..APPLICATIONS PROBLEM SOLVING
4	MOESTIM	612	142	5	44	1	OPINION..EMPHASIZE ESTIMATION
4	MOINSTR	612	143	5	45	1	OPINION..EMPHASIZE STANDARD INSTRUMENTS
4	MOOTHER	612	144	5	46	1	OPINION..OTHER MEASUREMENTS NOT IN MATH
4	MONSU	612	145	5	47	1	OPINION..NON-STANDARD UNITS ESSENTIAL
4	MOTTMW	612	146	5	48	1	OPINION..TIME TEMP MASS WEIGHT IN MATH
4	MOEMPF	612	147	5	49	1	OPINION..EMPHASIZE FORMULAS
4	MOCALC	612	148	5	50	1	OPINION..COMPUTE WITH CALCULATORS
4	MOACTM	612	149	5	51	1	OPINION..BEST TO ACTUALLY MEASURE THINGS
4	MOEXPF	612	150	5	52	1	OPINION..EXPECT TO KNOW FORMULAS
4	GSTEXT	613	1	1	20	1	USE OF..STUDENT TEXTBOOK
4	GSOTEXT	613	2	1	21	1	USE OF..OTHER PUBLISHED TEXT MATERIALS
4	GSLOCAL	613	3	1	22	1	USE OF..LOCALLY PRODUCED TEXT MATERIALS
4	GSINDIV	613	4	1	23	1	USE OF..INDIVIDUALIZED MATERIALS
4	GSFILM	613	5	1	24	1	USE OF..FILMS, FILMSTRIPS, MODELS
4	GSLAB	613	6	1	25	1	USE OF..LABORATORY MATERIALS
4	GTANGLE	613	7	1	26	1	TOPIC..ANGLES
4	GTTRANS	613	8	1	27	1	TOPIC..TRANSFORMATIONS
4	GTVEC	613	9	1	28	1	TOPIC..VECTORS
4	GTPYTH	613	10	1	29	1	TOPIC..THE PYTHAGOREAN THEOREM
4	GTTRI	613	11	1	30	1	TOPIC..TRIANGLES AND THEIR PROPERTIES
4	GTPOLY	613	12	1	31	1	TOPIC..POLYGONS AND THEIR PROPERTIES
4	GTCIRC	613	13	1	32	1	TOPIC..CIRCLES AND THEIR PROPERTIES
4	GTCNG	613	14	1	33	1	TOPIC..CONGRUENCE OF GEOMETRIC FIGURES
4	GTSIM	613	15	1	34	1	TOPIC..SIMILARITY OF GEOMETRIC FIGURES
4	GTPLINE	613	16	1	35	1	TOPIC..PARALLEL LINES
4	GTSREL	613	17	1	36	1	TOPIC..SPATIAL RELATIONS
4	GTSOLID	613	18	1	37	1	TOPIC..GEOMETRIC SOLIDS
4	GTRC	613	19	1	38	1	TOPIC..CONSTRUCTIONS WITH RULER COMPASS
4	GTPROOF	613	20	1	39	1	TOPIC..PROOFS FORMAL DEDUCTIVE DEMOS
4	GTTESS	613	21	1	40	1	TOPIC..TESSELLATIONS
4	GTCOOR	613	22	1	41	1	TOPIC..COORDINATE GEOMETRY
4	GIAEUCI	613	23	1	42	1	APPROACH..INFORMAL EUCLIDEAN
4	GIAEUCF	613	24	1	43	1	APPROACH..FORMAL EUCLIDEAN
4	GIATRNI	613	25	1	44	1	APPROACH..INFORMAL TRANSFORMATIONAL
4	GIATRNF	613	26	1	45	1	APPROACH..FORMAL TRANSFORMATIONAL
4	GIACoor	613	27	1	46	1	APPROACH..COORDINATE
4	GIAVEC	613	28	1	47	1	APPROACH..VECTOR
4	GAIDRUL	613	29	1	48	1	AID USE..RULER AND COMPASS
4	GAIDPRO	613	30	1	49	1	AID USE..PROTRACTOR
4	GAIDSSQ	613	31	1	50	1	AID USE..SET SQUARES DRAFTMANS TRIANGLES
4	GAIDGEO	613	32	1	51	1	AID USE..GEOBOARDS
4	GAIDCUT	613	33	1	52	1	AID USE..PAPER CUTOUTS OR PATTERNS
4	GAIDMOD	613	34	1	53	1	AID USE..MODELS OF SOLIDS
4	GAIDFLD	613	35	1	54	1	AID USE..PAPER FOLDING
4	GAIDTP	613	36	1	55	1	AID USE..TRACING PAPER
4	GAIDGP	613	37	1	56	1	AID USE..GRAPH PAPER
4	GAIDMIR	613	38	1	57	1	AID USE..MIRRORS OR TRNSLCNT REFLECTORS
4	GAIDFLM	613	39	1	58	1	AID USE..FILMSTRIPS AND FILMS
4	GAIDCGR	613	40	1	59	1	AID USE..COMPUTER GRAPHICS
4	GAIDKIT	613	41	1	60	1	AID USE..KITS FOR CONSTRUCTING FIGURES
4	GMTRINF	613	42	1	61	1	TRANSLATE INTERP..INFORMAL
4	GMTRVEC	613	43	1	62	1	TRANSLATE INTERP..VECTOR MAP

4	GMTRPAR	613	44	1	63	1	TRANSLATE INTERP..PAIR OF POINTS MAP	
4	GMTRSYM	613	45	1	64	1	TRANSLATE INTERP..SYMMETRY COMPOSITION	
4	GMTRXY	613	46	1	65	1	TRANSLATE INTERP..A B AND X Y	
4	GMTRBIJ	613	47	1	66	1	TRANSLATE INTERP..BIJECTION	
4	GMIVINF	613	48	1	67	1	VECTOR INTERP..INFORMAL	
4	GMIVAB	613	49	1	68	1	VECTOR INTERP..TRANSLATION AB AS A B	
4	GMIVMMU	613	50	1	69	1	VECTOR INTERP..POINT M TRANSLATION UM	
4	GMIVEQT	613	51	1	70	1	VECTOR INTERP..EQUIV CLASS TRANSLATION	
4	GMIVODL	613	52	1	71	1	VECTOR INTERP..ORIENT DIRECTION LENGTH	
4	GMIVEQM	613	53	1	72	1	VECTOR INTERP..EQUIV CLASS MIDPOINTS	
4	GMHDISE	613	54	2	20	1	EMPHASIZED..ANGLE SUM BY DISCOVERY	
4	GMHDIST	613	55	2	21	1	IN TEXT..ANGLE SUM BY DISCOVERY	
4	GMHDISK	613	56	1	2	22	1	KNOWN..ANGLE SUM BY DISCOVERY
4	GMHDISS	613	56	2	2	23	1	SYLLABUS..ANGLE SUM BY DISCOVERY
4	GMHDISU	613	56	3	2	24	1	UNDERSTAND..ANGLE SUM BY DISCOVERY
4	GMHDISL	613	56	4	2	25	1	LIKED..ANGLE SUM BY DISCOVERY
4	GMHDISR	613	56	5	2	26	1	RELATED..ANGLE SUM BY DISCOVERY
4	GMHDISF	613	56	6	2	27	1	FUTURE..ANGLE SUM BY DISCOVERY
4	GMHDISH	613	56	7	2	28	1	HARD..ANGLE SUM BY DISCOVERY
4	GMHDISX	613	56	8	2	29	1	TEXT EMPHASIS..ANGLE SUM BY DISCOVERY
4	GMHLINE	613	58	2	30	1	EMPHASIZED..ANGLE SUM BY DRAWING LINE	
4	GMHLINT	613	59	2	31	1	IN TEXT..ANGLE SUM BY DRAWING LINE	
4	GMHLINK	613	60	1	2	32	1	KNOWN..ANGLE SUM BY DRAWING LINE
4	GMHLINS	613	60	2	2	33	1	SYLLABUS..ANGLE SUM BY DRAWING LINE
4	GMHLINU	613	60	3	2	34	1	UNDERSTAND..ANGLE SUM BY DRAWING LINE
4	GMHLINL	613	60	4	2	35	1	LIKED..ANGLE SUM BY DRAWING LINE
4	GMHLINR	613	60	5	2	36	1	RELATED..ANGLE SUM BY DRAWING LINE
4	GMHLINF	613	60	6	2	37	1	FUTURE..ANGLE SUM BY DRAWING LINE
4	GMHLINH	613	60	7	2	38	1	HARD..ANGLE SUM BY DRAWING LINE
4	GMHLINX	613	60	8	2	39	1	TEXT EMPHASIS..ANGLE SUM BY DRAWING LINE
4	GMHCUTE	613	62	2	40	1	EMPHASIZED..ANGLE SUM BY CUTTING OFF	
4	GMHCUTT	613	63	2	41	1	IN TEXT..ANGLE SUM BY CUTTING OFF	
4	GMHCUTK	613	64	1	2	42	1	KNOWN..ANGLE SUM BY CUTTING OFF
4	GMHCUTS	613	64	2	2	43	1	SYLLABUS..ANGLE SUM BY CUTTING OFF
4	GMHCUTU	613	64	3	2	44	1	UNDERSTAND..ANGLE SUM BY CUTTING OFF
4	GMHCUTL	613	64	4	2	45	1	LIKED..ANGLE SUM BY CUTTING OFF
4	GMHCUTR	613	64	5	2	46	1	RELATED..ANGLE SUM BY CUTTING OFF
4	GMHCUTF	613	64	6	2	47	1	FUTURE..ANGLE SUM BY CUTTING OFF
4	GMHCUTH	613	64	7	2	48	1	HARD..ANGLE SUM BY CUTTING OFF
4	GMHCUTX	613	64	8	2	49	1	TEXT EMPHASIS..ANGLE SUM BY CUTTING OFF
4	GMHMSRE	613	66	2	50	1	EMPHASIZED..ANGLE SUM BY MEASURING	
4	GMHMSRT	613	67	2	51	1	IN TEXT..ANGLE SUM BY MEASURING	
4	GMHMSRK	613	68	1	2	52	1	KNOWN..ANGLE SUM BY MEASURING
4	GMHMSRS	613	68	2	2	53	1	SYLLABUS..ANGLE SUM BY MEASURING
4	GMHMSRU	613	68	3	2	54	1	UNDERSTAND..ANGLE SUM BY MEASURING
4	GMHMSRL	613	68	4	2	55	1	LIKED..ANGLE SUM BY MEASURING
4	GMHMSRR	613	68	5	2	56	1	RELATED..ANGLE SUM BY MEASURING
4	GMHMSRF	613	68	6	2	57	1	FUTURE..ANGLE SUM BY MEASURING
4	GMHMSRH	613	68	7	2	58	1	HARD..ANGLE SUM BY MEASURING
4	GMHMSRX	613	68	8	2	59	1	TEXT EMPHASIS..ANGLE SUM BY MEASURING
4	GMHFLDE	613	70	2	60	1	EMPHASIZED..ANGLE SUM BY FOLDING	
4	GMHFLDT	613	71	2	61	1	IN TEXT..ANGLE SUM BY FOLDING	
4	GMHFLDK	613	72	1	2	62	1	KNOWN..ANGLE SUM BY FOLDING
4	GMHFLDS	613	72	2	2	63	1	SYLLABUS..ANGLE SUM BY FOLDING
4	GMHFLDU	613	72	3	2	64	1	UNDERSTAND..ANGLE SUM BY FOLDING
4	GMHFLDL	613	72	4	2	65	1	LIKED..ANGLE SUM BY FOLDING
4	GMHFLDR	613	72	5	2	66	1	RELATED..ANGLE SUM BY FOLDING
4	GMHFLDF	613	72	6	2	67	1	FUTURE..ANGLE SUM BY FOLDING
4	GMHFLDH	613	72	7	2	68	1	HARD..ANGLE SUM BY FOLDING
4	GMHFLDX	613	72	8	2	69	1	TEXT EMPHASIS..ANGLE SUM BY FOLDING
4	GMHTRVE	613	74	2	70	1	EMPHASIZED..ANGLE SUM BY TRAVELLING	

4	GMHTRVT	613	75	2	71	1	IN TEXT..ANGLE SUM BY TRAVELLING	
4	GMHTRVK	613	76	1	2	72	1	KNOWN..ANGLE SUM BY TRAVELLING
4	GMHTRVS	613	76	2	2	73	1	SYLLABUS..ANGLE SUM BY TRAVELLING
4	GMHTRVU	613	76	3	2	74	1	UNDERSTAND..ANGLE SUM BY TRAVELLING
4	GMHTRVL	613	76	4	2	75	1	LIKED..ANGLE SUM BY TRAVELLING
4	GMHTRVR	613	76	5	2	76	1	RELATED..ANGLE SUM BY TRAVELLING
4	GMHTRVF	613	76	6	2	77	1	FUTURE..ANGLE SUM BY TRAVELLING
4	GMHTRVH	613	76	7	2	78	1	HARD..ANGLE SUM BY TRAVELLING
4	GMHTRVX	613	76	8	2	79	1	TEXT EMPHASIS..ANGLE SUM BY TRAVELLING
4	GMHTESE	613	78	3	20	1	EMPHASIZED..ANGLE SUM BY TESSELATIONS	
4	GMHTEST	613	79	3	21	1	IN TEXT..ANGLE SUM BY TESSELATIONS	
4	GMHTESK	613	80	1	3	22	1	KNOWN..ANGLE SUM BY TESSELATIONS
4	GMHTESS	613	80	2	3	23	1	SYLLABUS..ANGLE SUM BY TESSELATIONS
4	GMHTESU	613	80	3	3	24	1	UNDERSTAND..ANGLE SUM BY TESSELATIONS
4	GMHTESL	613	80	4	3	25	1	LIKED..ANGLE SUM BY TESSELATIONS
4	GMHTESR	613	80	5	3	26	1	RELATED..ANGLE SUM BY TESSELATIONS
4	GMHTESEF	613	80	6	3	27	1	FUTURE..ANGLE SUM BY TESSELATIONS
4	GMHTESEH	613	80	7	3	28	1	HARD..ANGLE SUM BY TESSELATIONS
4	GMHTESEX	613	80	8	3	29	1	TEXT EMPHASIS..ANGLE SUM BY TESSELATIONS
4	GMHRCE	613	82	3	30	1	EMPHASIZED..ANGLE SUM BY R AND C	
4	GMHRCT	613	83	3	31	1	IN TEXT..ANGLE SUM BY R AND C	
4	GMHRCK	613	84	1	3	32	1	KNOWN..ANGLE SUM BY R AND C
4	GMHRCS	613	84	2	3	33	1	SYLLABUS..ANGLE SUM BY R AND C
4	GMHRCU	613	84	3	3	34	1	UNDERSTAND..ANGLE SUM BY R AND C
4	GMHRCL	613	84	4	3	35	1	LIKED..ANGLE SUM BY R AND C
4	GMHRCR	613	84	5	3	36	1	RELATED..ANGLE SUM BY R AND C
4	GMHRCF	613	84	6	3	37	1	FUTURE..ANGLE SUM BY R AND C
4	GMHRCH	613	84	7	3	38	1	HARD..ANGLE SUM BY R AND C
4	GMHRCX	613	84	8	3	39	1	TEXT EMPHASIS..ANGLE SUM BY R AND C
4	GMPMSRE	613	86	3	40	1	EMPHASIZED..PYTHAGOREAN BY MEASURING	
4	GMPMSRT	613	87	3	41	1	IN TEXT..PYTHAGOREAN BY MEASURING	
4	GMPMSRK	613	88	1	3	42	1	KNOWN..PYTHAGOREAN BY MEASURING
4	GMPMSRS	613	88	2	3	43	1	SYLLABUS..PYTHAGOREAN BY MEASURING
4	GMPMSRU	613	88	3	3	44	1	UNDERSTAND..PYTHAGOREAN BY MEASURING
4	GMPMSRL	613	88	4	3	45	1	LIKED..PYTHAGOREAN BY MEASURING
4	GMPMSRR	613	88	5	3	46	1	RELATED..PYTHAGOREAN BY MEASURING
4	GMPMSRF	613	88	6	3	47	1	FUTURE..PYTHAGOREAN BY MEASURING
4	GMPMSRH	613	88	7	3	48	1	HARD..PYTHAGOREAN BY MEASURING
4	GMPMSRX	613	88	8	3	49	1	TEXT EMPHASIS..PYTHAGOREAN BY MEASURING
4	GMPDGME	613	90	3	50	1	EMPHASIZED..PYTHAGOREAN BY DIAGRAMS	
4	GMPDGMT	613	91	3	51	1	IN TEXT..PYTHAGOREAN BY DIAGRAMS	
4	GMPDGMK	613	92	1	3	52	1	KNOWN..PYTHAGOREAN BY DIAGRAMS
4	GMPDGMS	613	92	2	3	53	1	SYLLABUS..PYTHAGOREAN BY DIAGRAMS
4	GMPDGMU	613	92	3	3	54	1	UNDERSTAND..PYTHAGOREAN BY DIAGRAMS
4	GMPDGML	613	92	4	3	55	1	LIKED..PYTHAGOREAN BY DIAGRAMS
4	GMPDGMR	613	92	5	3	56	1	RELATED..PYTHAGOREAN BY DIAGRAMS
4	GMPDGMF	613	92	6	3	57	1	FUTURE..PYTHAGOREAN BY DIAGRAMS
4	GMPDGMH	613	92	7	3	58	1	HARD..PYTHAGOREAN BY DIAGRAMS
4	GMPDGMX	613	92	8	3	59	1	TEXT EMPHASIS..PYTHAGOREAN BY DIAGRAMS
4	GMPFRME	613	94	3	60	1	EMPHASIZED..PYTHAGOREAN BY FORMULA	
4	GMPFRMT	613	95	3	61	1	IN TEXT..PYTHAGOREAN BY FORMULA	
4	GMPFRMK	613	96	1	3	62	1	KNOWN..PYTHAGOREAN BY FORMULA
4	GMPFRMS	613	96	2	3	63	1	SYLLABUS..PYTHAGOREAN BY FORMULA
4	GMPFRMU	613	96	3	3	64	1	UNDERSTAND..PYTHAGOREAN BY FORMULA
4	GMPFRML	613	96	4	3	65	1	LIKED..PYTHAGOREAN BY FORMULA
4	GMPFRMR	613	96	5	3	66	1	RELATED..PYTHAGOREAN BY FORMULA
4	GMPFRMF	613	96	6	3	67	1	FUTURE..PYTHAGOREAN BY FORMULA
4	GMPFRMH	613	96	7	3	68	1	HARD..PYTHAGOREAN BY FORMULA
4	GMPFRMX	613	96	8	3	69	1	TEXT EMPHASIS..PYTHAGOREAN BY FORMULA
4	GMPHISE	613	98	3	70	1	EMPHASIZED..PYTHAGOREAN BY HISTORY	
4	GMPHIST	613	99	3	71	1	IN TEXT..PYTHAGOREAN BY HISTORY	

4	GMPHISK	613	100	1	3	72	1	KNOWN..PYTHAGOREAN BY HISTORY
4	GMPHISS	613	100	2	3	73	1	SYLLABUS..PYTHAGOREAN BY HISTORY
4	GMPHISU	613	100	3	3	74	1	UNDERSTAND..PYTHAGOREAN BY HISTORY
4	GMPHISL	613	100	4	3	75	1	LIKED..PYTHAGOREAN BY HISTORY
4	GMPHISR	613	100	5	3	76	1	RELATED..PYTHAGOREAN BY HISTORY
4	GMPHISF	613	100	6	3	77	1	FUTURE..PYTHAGOREAN BY HISTORY
4	GMPHISH	613	100	7	3	78	1	HARD..PYTHAGOREAN BY HISTORY
4	GMPHISX	613	100	8	3	79	1	TEXT EMPHASIS..PYTHAGOREAN BY HISTORY
4	GMPPHYE	613	102		4	20	1	EMPHASIZED..PYTHAGOREAN BY PHY MODEL
4	GMPPHYT	613	103		4	21	1	IN TEXT..PYTHAGOREAN BY PHY MODEL
4	GMPPHYK	613	104	1	4	22	1	KNOWN..PYTHAGOREAN BY PHY MODEL
4	GMPPHYYS	613	104	2	4	23	1	SYLLABUS..PYTHAGOREAN BY PHY MODEL
4	GMPPHYU	613	104	3	4	24	1	UNDERSTAND..PYTHAGOREAN BY PHY MODEL
4	GMPPHYL	613	104	4	4	25	1	LIKED..PYTHAGOREAN BY PHY MODEL
4	GMPPHYR	613	104	5	4	26	1	RELATED..PYTHAGOREAN BY PHY MODEL
4	GMPPHYF	613	104	6	4	27	1	FUTURE..PYTHAGOREAN BY PHY MODEL
4	GMPPHYH	613	104	7	4	28	1	HARD..PYTHAGOREAN BY PHY MODEL
4	GMPPHYX	613	104	8	4	29	1	TEXT EMPHASIS..PYTHAGOREAN BY PHY MODEL
4	GMPDALE	613	106		4	30	1	EMPHASIZED..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALT	613	107		4	31	1	IN TEXT..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALK	613	108	1	4	32	1	KNOWN..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALS	613	108	2	4	33	1	SYLLABUS..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALU	613	108	3	4	34	1	UNDERSTAND..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALL	613	108	4	4	35	1	LIKED..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALR	613	108	5	4	36	1	RELATED..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALF	613	108	6	4	37	1	FUTURE..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALH	613	108	7	4	38	1	HARD..PYTHAGOREAN BY DDUCT ALGB
4	GMPDALX	613	108	8	4	39	1	TEXT EMPHASIS..PYTHAGOREAN BY DDUCT ALGB
4	GMPDARE	613	110		4	40	1	EMPHASIZED..PYTHAGOREAN BY DDUCT AREA
4	GMPDART	613	111		4	41	1	IN TEXT..PYTHAGOREAN BY DDUCT AREA
4	GMPDARK	613	112	1	4	42	1	KNOWN..PYTHAGOREAN BY DDUCT AREA
4	GMPDARS	613	112	2	4	43	1	SYLLABUS..PYTHAGOREAN BY DDUCT AREA
4	GMPDARU	613	112	3	4	44	1	UNDERSTAND..PYTHAGOREAN BY DDUCT AREA
4	GMPDARL	613	112	4	4	45	1	LIKED..PYTHAGOREAN BY DDUCT AREA
4	GMPDARR	613	112	5	4	46	1	RELATED..PYTHAGOREAN BY DDUCT AREA
4	GMPDARF	613	112	6	4	47	1	FUTURE..PYTHAGOREAN BY DDUCT AREA
4	GMPDARH	613	112	7	4	48	1	HARD..PYTHAGOREAN BY DDUCT AREA
4	GMPDARX	613	112	8	4	49	1	TEXT EMPHASIS..PYTHAGOREAN BY DDUCT AREA
4	GMCTDEF	613	114		4	50	1	CNGRNT TRIANGLES..DEFINITION PROPERTIES
4	GMCTPAP	613	115		4	51	1	CNGRNT TRIANGLES..GRAPH OR TRACING PAPER
4	GMCTMSR	613	116		4	52	1	CNGRNT TRIANGLES..MEASUREMENT
4	GMCTRC	613	117		4	53	1	CNGRNT TRIANGLES..RULERS AND COMPASS
4	GMCTGEO	613	118		4	54	1	CNGRNT TRIANGLES..GEOBOARD
4	GMCTENV	613	119		4	55	1	CNGRNT TRIANGLES..ENVIRONMENT
4	GMCTTRN	613	120		4	56	1	CNGRNT TRIANGLES..TRANSFORMATIONS
4	GMSTDEF	613	121		4	57	1	SMLR TRIANGLES..DEFINITION PROPERTIES
4	GMSTPAP	613	122		4	58	1	SMLR TRIANGLES..GRAPH OR TRACING PAPER
4	GMSTMSR	613	123		4	59	1	SMLR TRIANGLES..MEASUREMENT
4	GMSTRC	613	124		4	60	1	SMLR TRIANGLES..RULER AND COMPASS
4	GMSTGEO	613	125		4	61	1	SMLR TRIANGLES..GEOBOARD
4	GMSTENV	613	126		4	62	1	SMLR TRIANGLES..ENVIRONMENT
4	GMSTDIL	613	127		4	63	1	SMLR TRIANGLES..DILATIONS
4	GMLLDEF	613	128		4	64	1	PARALLEL LINES..DEFINITION AND EXAMPLES
4	GMLLFLD	613	129		4	65	1	PARALLEL LINES..PAPER FOLDING
4	GMLLMSR	613	130		4	66	1	PARALLEL LINES..MEASUREMENT
4	GMLLRC	613	131		4	67	1	PARALLEL LINES..RULER AND COMPASS
4	GMLLTES	613	132		4	68	1	PARALLEL LINES..TESSELLATIONS
4	GMLLGEO	613	133		4	69	1	PARALLEL LINES..GEOBOARDS
4	GMLLSSQ	613	134		4	70	1	PARALLEL LINES..STRAIGHTEDGE SET SQUARES
4	GMLLENV	613	135		4	71	1	PARALLEL LINES..ENVIRONMENT
4	GMLLTRN	613	136		4	72	1	PARALLEL LINES..TRANSLATIONS

4	GMLLREF	613	137	4	73	1	PARALLEL LINES..REFLECTIONS
4	GMLLROT	613	138	4	74	1	PARALLEL LINES..ROTATIONS
4	GMSRPAT	613	139	4	75	1	SPATIAL RLNTNS..READY MADE 2 D PATTERN
4	GMSRDGN	613	140	4	76	1	SPATIAL RLNTNS..DESIGN 2 D PATTERN
4	GMSRDRW	613	141	4	77	1	SPATIAL RLNTNS..2 D DRAWING
4	GMSRPLN	613	142	4	78	1	SPATIAL RLNTNS..DRAWING PLANS ELEVATIONS
4	GMSRINT	613	143	4	79	1	SPATIAL RLNTNS..INTERSECTION WITH A PLANE
4	GMSRALG	613	144	4	80	1	SPATIAL RLNTNS..NUMERICAL ALGEBRAIC
4	GMSRBLD	613	145	5	20	1	SPATIAL RLNTNS..BUILD MODELS OF PLANES
4	GMSRSHD	613	146	5	21	1	SPATIAL RLNTNS..PREDICTING SHAPE SHADOWS
4	GPSIZE	613	147	5	22	3	AVERAGE LENGTH OF MATH PERIOD MINUTES
4	GPTOTAL	613	148	5	25	3	PERIODS..TOTAL IN GEOMETRY
4	GPANGLE	613	149	5	28	2	PERIODS..CONCEPT OF ANGLES
4	GPTRANS	613	150	5	30	2	PERIODS..TRANSFORMATIONS
4	GPVEC	613	151	5	32	2	PERIODS..VECTORS
4	GPPYTH	613	152	5	34	2	PERIODS..THE PYTHAGOREAN THEOREM
4	GPTRI	613	153	5	36	2	PERIODS..TRIANGLES AND THEIR PROPERTIES
4	GPOLY	613	154	5	38	2	PERIODS..POLYGONS AND THEIR PROPERTIES
4	GPCIRC	613	155	5	40	2	PERIODS..CIRCLES AND THEIR PROPERTIES
4	GPCNG	613	156	5	42	2	PERIODS..CONGRUENCE OF GEOMETRIC FIGURES
4	GPSIM	613	157	5	44	2	PERIODS..SIMILARITY OF GEOMETRIC FIGURES
4	GPPLINE	613	158	5	46	2	PERIODS..PARALLEL LINES
4	GPSREL	613	159	5	48	2	PERIODS..SPATIAL RELATIONS
4	GPSOLID	613	160	5	50	2	PERIODS..GEOMETRIC SOLIDS
4	GPRC	613	161	5	52	2	PERIODS..CONSTRUCTIONS RULER COMPASS
4	GPPROOF	613	162	5	54	2	PERIODS..PROOFS FORMAL DEDUCTIVE DEMOS
4	GPTESS	613	163	5	56	2	PERIODS..TESSELLATIONS
4	GPCOOR	613	164	5	58	2	PERIODS..COORDINATE GEOMETRY
4	GPAPPL	613	165	5	60	2	PERIODS..APPLICATIONS PROBLEM SOLVING
4	GOMREAL	613	166	5	62	1	OPINION..OBJECTIVE IS MODEL REAL WORLD
4	GODEDUC	613	167	5	63	1	OPINION..GOAL IS DEDUCTIVE PROCEDURES
4	GOFDEMO	613	168	5	64	1	OPINION..OBJECTIVE IS FORMAL DEMO
4	GOAXIOM	613	169	5	65	1	OPINION..USE ORDER OF AXIOMATIC APPROACH
4	GOINTU	613	170	5	66	1	OPINION..INTUITIVE APPROACH MEANS MORE
4	GOTRANS	613	171	5	67	1	OPINION..TEACH THROUGH TRANSFORMATIONS
4	GOAIDS	613	172	5	68	1	OPINION..USE OF MODELS AIDS ESSENTIAL
4	GOTHRD	613	173	5	69	1	OPINION..3 D FOR MEASUREMENT ONLY
4	GOCPTTR	613	174	5	70	1	OPINION..INCLUDE CONCEPT OF TRANSLATION
4	GOCPTVC	613	175	5	71	1	OPINION..INCLUDE CONCEPT OF VECTOR
4	GODELVC	613	176	5	72	1	OPINION..DELAY STUDY OF VECTORS
4	GOVISUL	613	177	5	73	1	OPINION..USE VISUALIZATION ACTIVITIES
4	GOPOLY	613	178	5	74	1	OPINION..LIMIT PLYGNS TO TRNGL AND SQR
4	GORC	613	179	5	75	1	OPINION..SKILL IN RULER COMPASS
4	GOPROOF	613	180	5	76	1	OPINION..DEMO OF PROOFS ESSENTIAL
4	GOHEDUC	613	181	5	77	1	OPINION..GEOMETRY FOR HIGHER EDUCATION
4	GODELPF	613	182	5	78	1	OPINION..DELAY PROOF OF THEOREMS
4	ASTEXT	614	1	1	20	1	USE OF..STUDENT TEXTBOOK
4	ASOTEXT	614	2	1	21	1	USE OF..OTHER PUBLISHED TEXT MATERIALS
4	ASLOCAL	614	3	1	22	1	USE OF..LOCALLY PRODUCED TEXT MATERIALS
4	ASINDIV	614	4	1	23	1	USE OF..INDIVIDUALIZED MATERIALS
4	ASFILM	614	5	1	24	1	USE OF..FILMS, FILMSTRIPS, MODELS
4	ASLAB	614	6	1	25	1	USE OF..LABORATORY MATERIALS
4	ATIPN	614	7	1	26	1	TOPIC..CONCEPT OF POS AND NEG INTEGERS
4	ATIADD	614	8	1	27	1	TOPIC..ADDITION OF INTEGERS
4	ATISUB	614	9	1	28	1	TOPIC..SUBTRACTION OF INTEGERS
4	ATIMUL	614	10	1	29	1	TOPIC..MULTIPLICATION OF INTEGERS
4	ATIDIV	614	11	1	30	1	TOPIC..DIVISION OF INTEGERS
4	ATISTRC	614	12	1	31	1	TOPIC..STRUCTURAL PROPS OF INTEGER SET
4	ATIORD	614	13	1	32	1	TOPIC..ORDER RELATIONS OF INTEGERS
4	ATEEVAL	614	14	1	33	1	TOPIC..EVALUATIONS OF FORMULAS
4	ATEDERV	614	15	1	34	1	TOPIC..DERIVING FORMULAS OR EQUATIONS

4	ATESLIT	614	16	1	35	1	TOPIC..SOLVING LITERAL EQUATIONS	
4	ATESLIN	614	17	1	36	1	TOPIC..SOLVING LINEAR EQUATIONS	
4	AMIRAYE	614	18	1	37	1	EMPHASIZED..INTEGERS BY NUMBER RAY	
4	AMIRAYT	614	19	1	38	1	IN TEXT..INTEGERS BY NUMBER RAY	
4	AMIRAYK	614	20	1	1	39	1	KNOWN..INTEGERS BY NUMBER RAY
4	AMIRAYS	614	20	2	1	40	1	SYLLABUS..INTEGERS BY NUMBER RAY
4	AMIRAYU	614	20	3	1	41	1	UNDERSTAND..INTEGERS BY NUMBER RAY
4	AMIRAYL	614	20	4	1	42	1	LIKED..INTEGERS BY NUMBER RAY
4	AMIRAYR	614	20	5	1	43	1	RELATED..INTEGERS BY NUMBER RAY
4	AMIRAYF	614	20	6	1	44	1	FUTURE..INTEGERS BY NUMBER RAY
4	AMIRAYH	614	20	7	1	45	1	HARD..INTEGERS BY NUMBER RAY
4	AMIRAYX	614	20	8	1	46	1	TEXT EMPHASIS..INTEGERS BY NUMBER RAY
4	AMISOLE	614	22	1	47	1	EMPHASIZED..INTEGERS AS SOLUTIONS	
4	AMISOLT	614	23	1	48	1	IN TEXT..INTEGERS AS SOLUTIONS	
4	AMISOLK	614	24	1	1	49	1	KNOWN..INTEGERS AS SOLUTIONS
4	AMISOLS	614	24	2	1	50	1	SYLLABUS..INTEGERS AS SOLUTIONS
4	AMISOLU	614	24	3	1	51	1	UNDERSTAND..INTEGERS AS SOLUTIONS
4	AMISOLL	614	24	4	1	52	1	LIKED..INTEGERS AS SOLUTIONS
4	AMISOLR	614	24	5	1	53	1	RELATED..INTEGERS AS SOLUTIONS
4	AMISOLF	614	24	6	1	54	1	FUTURE..INTEGERS AS SOLUTIONS
4	AMISOLH	614	24	7	1	55	1	HARD..INTEGERS AS SOLUTIONS
4	AMISOLX	614	24	8	1	56	1	TEXT EMPHASIS..INTEGERS AS SOLUTIONS
4	AMIVECE	614	26	1	57	1	EMPHASIZED..INTEGERS BY VECTORS	
4	AMIVECT	614	27	1	58	1	IN TEXT..INTEGERS BY VECTORS	
4	AMIVECK	614	28	1	1	59	1	KNOWN..INTEGERS BY VECTORS
4	AMIVECS	614	28	2	1	60	1	SYLLABUS..INTEGERS BY VECTORS
4	AMIVECU	614	28	3	1	61	1	UNDERSTAND..INTEGERS BY VECTORS
4	AMIVECL	614	28	4	1	62	1	LIKED..INTEGERS BY VECTORS
4	AMIVECR	614	28	5	1	63	1	RELATED..INTEGERS BY VECTORS
4	AMIVECF	614	28	6	1	64	1	FUTURE..INTEGERS BY VECTORS
4	AMIVECH	614	28	7	1	65	1	HARD..INTEGERS BY VECTORS
4	AMIVECX	614	28	8	1	66	1	TEXT EMPHASIS..INTEGERS BY VECTORS
4	AMICLSE	614	30	1	67	1	EMPHASIZED..INTEGERS AS EQU CLASSES	
4	AMICLST	614	31	1	68	1	IN TEXT..INTEGERS AS EQU CLASSES	
4	AMICLSK	614	32	1	1	69	1	KNOWN..INTEGERS AS EQU CLASSES
4	AMICLSS	614	32	2	1	70	1	SYLLABUS..INTEGERS AS EQU CLASSES
4	AMICLSU	614	32	3	1	71	1	UNDERSTAND..INTEGERS AS EQU CLASSES
4	AMICLSL	614	32	4	1	72	1	LIKED..INTEGERS AS EQU CLASSES
4	AMICLSR	614	32	5	1	73	1	RELATED..INTEGERS AS EQU CLASSES
4	AMICLSF	614	32	6	1	74	1	FUTURE..INTEGERS AS EQU CLASSES
4	AMICLSH	614	32	7	1	75	1	HARD..INTEGERS AS EQU CLASSES
4	AMICLSX	614	32	8	1	76	1	TEXT EMPHASIS..INTEGERS AS EQU CLASSES
4	AMIPHYE	614	34	2	20	1	EMPHASIZED..INTEGERS BY PHY SITS	
4	AMIPHYT	614	35	2	21	1	IN TEXT..INTEGERS BY PHY SITS	
4	AMIPHYK	614	36	1	2	22	1	KNOWN..INTEGERS BY PHY SITS
4	AMIPHYS	614	36	2	2	23	1	SYLLABUS..INTEGERS BY PHY SITS
4	AMIPHYU	614	36	3	2	24	1	UNDERSTAND..INTEGERS BY PHY SITS
4	AMIPHYL	614	36	4	2	25	1	LIKED..INTEGERS BY PHY SITS
4	AMIPHYR	614	36	5	2	26	1	RELATED..INTEGERS BY PHY SITS
4	AMIPHYF	614	36	6	2	27	1	FUTURE..INTEGERS BY PHY SITS
4	AMIPHYH	614	36	7	2	28	1	HARD..INTEGERS BY PHY SITS
4	AMIPHYX	614	36	8	2	29	1	TEXT EMPHASIS..INTEGERS BY PHY SITS
4	AMALINE	614	38	2	30	1	EMPHASIZED..INTEGER ADD BY NUM LINE	
4	AMALINT	614	39	2	31	1	IN TEXT..INTEGER ADD BY NUM LINE	
4	AMALINK	614	40	1	2	32	1	KNOWN..INTEGER ADD BY NUM LINE
4	AMALINS	614	40	2	2	33	1	SYLLABUS..INTEGER ADD BY NUM LINE
4	AMALINU	614	40	3	2	34	1	UNDERSTAND..INTEGER ADD BY NUM LINE
4	AMALINL	614	40	4	2	35	1	LIKED..INTEGER ADD BY NUM LINE
4	AMALINR	614	40	5	2	36	1	RELATED..INTEGER ADD BY NUM LINE
4	AMALINF	614	40	6	2	37	1	FUTURE..INTEGER ADD BY NUM LINE
4	AMALINH	614	40	7	2	38	1	HARD..INTEGER ADD BY NUM LINE

4	AMALINX	614	40	8	2	39	1	TEXT EMPHASIS..INTEGER ADD BY NUM LINE
4	AMARULE	614	42		2	40	1	EMPHASIZED..INTEGER ADD BY RULES
4	AMARULT	614	43		2	41	1	IN TEXT..INTEGER ADD BY RULES
4	AMARULK	614	44	1	2	42	1	KNOWN..INTEGER ADD BY RULES
4	AMARULS	614	44	2	2	43	1	SYLLABUS..INTEGER ADD BY RULES
4	AMARULU	614	44	3	2	44	1	UNDERSTAND..INTEGER ADD BY RULES
4	AMARULL	614	44	4	2	45	1	LIKED..INTEGER ADD BY RULES
4	AMARULR	614	44	5	2	46	1	RELATED..INTEGER ADD BY RULES
4	AMARULF	614	44	6	2	47	1	FUTURE..INTEGER ADD BY RULES
4	AMARULH	614	44	7	2	48	1	HARD..INTEGER ADD BY RULES
4	AMARULX	614	44	8	2	49	1	TEXT EMPHASIS..INTEGER ADD BY RULES
4	AMAPHYE	614	46		2	50	1	EMPHASIZED..INTEGER ADD BY PHY SITS
4	AMAPHYT	614	47		2	51	1	IN TEXT..INTEGER ADD BY PHY SITS
4	AMAPHYK	614	48	1	2	52	1	KNOWN..INTEGER ADD BY PHY SITS
4	AMAPHYS	614	48	2	2	53	1	SYLLABUS..INTEGER ADD BY PHY SITS
4	AMAPHYU	614	48	3	2	54	1	UNDERSTAND..INTEGER ADD BY PHY SITS
4	AMAPHYL	614	48	4	2	55	1	LIKED..INTEGER ADD BY PHY SITS
4	AMAPHYR	614	48	5	2	56	1	RELATED..INTEGER ADD BY PHY SITS
4	AMAPHYF	614	48	6	2	57	1	FUTURE..INTEGER ADD BY PHY SITS
4	AMAPHYH	614	48	7	2	58	1	HARD..INTEGER ADD BY PHY SITS
4	AMAPHYX	614	48	8	2	59	1	TEXT EMPHASIS..INTEGER ADD BY PHY SITS
4	AMSLINE	614	50		2	60	1	EMPHASIZED..INTEGER SUB BY NUM LINE
4	AMSLINT	614	51		2	61	1	IN TEXT..INTEGER SUB BY NUM LINE
4	AMSLINK	614	52	1	2	62	1	KNOWN..INTEGER SUB BY NUM LINE
4	AMSLINS	614	52	2	2	63	1	SYLLABUS..INTEGER SUB BY NUM LINE
4	AMSLINU	614	52	3	2	64	1	UNDERSTAND..INTEGER SUB BY NUM LINE
4	AMSLINL	614	52	4	2	65	1	LIKED..INTEGER SUB BY NUM LINE
4	AMSLINR	614	52	5	2	66	1	RELATED..INTEGER SUB BY NUM LINE
4	AMSLINF	614	52	6	2	67	1	FUTURE..INTEGER SUB BY NUM LINE
4	AMSLINH	614	52	7	2	68	1	HARD..INTEGER SUB BY NUM LINE
4	AMSLINX	614	52	8	2	69	1	TEXT EMPHASIS..INTEGER SUB BY NUM LINE
4	AMSINVE	614	54		2	70	1	EMPHASIZED..INTEGER SUB AS INV ADD
4	AMSINVT	614	55		2	71	1	IN TEXT..INTEGER SUB AS INV ADD
4	AMSINVK	614	56	1	2	72	1	KNOWN..INTEGER SUB AS INV ADD
4	AMSINVS	614	56	2	2	73	1	SYLLABUS..INTEGER SUB AS INV ADD
4	AMSINVU	614	56	3	2	74	1	UNDERSTAND..INTEGER SUB AS INV ADD
4	AMSINVL	614	56	4	2	75	1	LIKED..INTEGER SUB AS INV ADD
4	AMSINVR	614	56	5	2	76	1	RELATED..INTEGER SUB AS INV ADD
4	AMSINVF	614	56	6	2	77	1	FUTURE..INTEGER SUB AS INV ADD
4	AMSINVH	614	56	7	2	78	1	HARD..INTEGER SUB AS INV ADD
4	AMSINVX	614	56	8	2	79	1	TEXT EMPHASIS..INTEGER SUB AS INV ADD
4	AMSRULE	614	58		3	20	1	EMPHASIZED..INTEGER SUB BY RULES
4	AMSRULT	614	59		3	21	1	IN TEXT..INTEGER SUB BY RULES
4	AMSRULK	614	60	1	3	22	1	KNOWN..INTEGER SUB BY RULES
4	AMSRULS	614	60	2	3	23	1	SYLLABUS..INTEGER SUB BY RULES
4	AMSRULU	614	60	3	3	24	1	UNDERSTAND..INTEGER SUB BY RULES
4	AMSRULL	614	60	4	3	25	1	LIKED..INTEGER SUB BY RULES
4	AMSRULR	614	60	5	3	26	1	RELATED..INTEGER SUB BY RULES
4	AMSRULF	614	60	6	3	27	1	FUTURE..INTEGER SUB BY RULES
4	AMSRULH	614	60	7	3	28	1	HARD..INTEGER SUB BY RULES
4	AMSRULX	614	60	8	3	29	1	TEXT EMPHASIS..INTEGER SUB BY RULES
4	AMSUNSE	614	62		3	30	1	EMPHASIZED..INTEGER SUB BY UNITS
4	AMSUNST	614	63		3	31	1	IN TEXT..INTEGER SUB BY UNITS
4	AMSUNSK	614	64	1	3	32	1	KNOWN..INTEGER SUB BY UNITS
4	AMSUNSS	614	64	2	3	33	1	SYLLABUS..INTEGER SUB BY UNITS
4	AMSUNSU	614	64	3	3	34	1	UNDERSTAND..INTEGER SUB BY UNITS
4	AMSUNSL	614	64	4	3	35	1	LIKED..INTEGER SUB BY UNITS
4	AMSUNSR	614	64	5	3	36	1	RELATED..INTEGER SUB BY UNITS
4	AMSUNSF	614	64	6	3	37	1	FUTURE..INTEGER SUB BY UNITS
4	AMSUNSH	614	64	7	3	38	1	HARD..INTEGER SUB BY UNITS
4	AMSUNSX	614	64	8	3	39	1	TEXT EMPHASIS..INTEGER SUB BY UNITS

4	AMSADDE	614	66	3	40	1	EMPHASIZED..INTEGER SUB BY WHAT ADD	
4	AMSADDT	614	67	3	41	1	IN TEXT..INTEGER SUB BY WHAT ADD	
4	AMSADDK	614	68	1	3	42	1	KNOWN..INTEGER SUB BY WHAT ADD
4	AMSADDS	614	68	2	3	43	1	SYLLABUS..INTEGER SUB BY WHAT ADD
4	AMSADDU	614	68	3	3	44	1	UNDERSTAND..INTEGER SUB BY WHAT ADD
4	AMSADDL	614	68	4	3	45	1	LIKED..INTEGER SUB BY WHAT ADD
4	AMSADDR	614	68	5	3	46	1	RELATED..INTEGER SUB BY WHAT ADD
4	AMSADDF	614	68	6	3	47	1	FUTURE..INTEGER SUB BY WHAT ADD
4	AMSADDH	614	68	7	3	48	1	HARD..INTEGER SUB BY WHAT ADD
4	AMSADDX	614	68	8	3	49	1	TEXT EMPHASIS..INTEGER SUB BY WHAT ADD
4	AMPADD	614	70	3	50	1	PRODUCT CONCEPT..REPEATED ADDITION	
4	AMPEXT	614	71	3	51	1	PRODUCT CONCEPT..EXTENSION OF PROPERTIES	
4	AMPPHY	614	72	3	52	1	PRODUCT CONCEPT..PHYSICAL SITUATIONS	
4	AMPPAT	614	73	3	53	1	PRODUCT CONCEPT..PATTERNS	
4	AMPRUL	614	74	3	54	1	PRODUCT CONCEPT..JUST RULES	
4	AMEEQUE	614	75	3	55	1	EMPHASIZED..LEQ SOLVE BY EQU PROPS	
4	AMEEQUT	614	76	3	56	1	IN TEXT..LEQ SOLVE BY EQU PROPS	
4	AMEEQUK	614	77	1	3	57	1	KNOWN..LEQ SOLVE BY EQU PROPS
4	AMEEQUS	614	77	2	3	58	1	SYLLABUS..LEQ SOLVE BY EQU PROPS
4	AMEEQUU	614	77	3	3	59	1	UNDERSTAND..LEQ SOLVE BY EQU PROPS
4	AMEEQL	614	77	4	3	60	1	LIKED..LEQ SOLVE BY EQU PROPS
4	AMEEQR	614	77	5	3	61	1	RELATED..LEQ SOLVE BY EQU PROPS
4	AMEEQUF	614	77	6	3	62	1	FUTURE..LEQ SOLVE BY EQU PROPS
4	AMEEQUH	614	77	7	3	63	1	HARD..LEQ SOLVE BY EQU PROPS
4	AMEEQUX	614	77	8	3	64	1	TEXT EMPHASIS..LEQ SOLVE BY EQU PROPS
4	AMEINVE	614	79	3	65	1	EMPHASIZED..LEQ SOLVE BY INV OPS	
4	AMEINVT	614	80	3	66	1	IN TEXT..LEQ SOLVE BY INV OPS	
4	AMEINVK	614	81	1	3	67	1	KNOWN..LEQ SOLVE BY INV OPS
4	AMEINVS	614	81	2	3	68	1	SYLLABUS..LEQ SOLVE BY INV OPS
4	AMEINVU	614	81	3	3	69	1	UNDERSTAND..LEQ SOLVE BY INV OPS
4	AMEINVL	614	81	4	3	70	1	LIKED..LEQ SOLVE BY INV OPS
4	AMEINVR	614	81	5	3	71	1	RELATED..LEQ SOLVE BY INV OPS
4	AMEINVF	614	81	6	3	72	1	FUTURE..LEQ SOLVE BY INV OPS
4	AMEINVH	614	81	7	3	73	1	HARD..LEQ SOLVE BY INV OPS
4	AMEINVX	614	81	8	3	74	1	TEXT EMPHASIS..LEQ SOLVE BY INV OPS
4	AMEARTE	614	83	4	20	1	EMPHASIZED..LEQ SOLVE BY ARITH REASON	
4	AMEARTT	614	84	4	21	1	IN TEXT..LEQ SOLVE BY ARITH REASON	
4	AMEARTK	614	85	1	4	22	1	KNOWN..LEQ SOLVE BY ARITH REASON
4	AMEARTS	614	85	2	4	23	1	SYLLABUS..LEQ SOLVE BY ARITH REASON
4	AMEARTU	614	85	3	4	24	1	UNDERSTAND..LEQ SOLVE BY ARITH REASON
4	AMEARTL	614	85	4	4	25	1	LIKED..LEQ SOLVE BY ARITH REASON
4	AMEARTR	614	85	5	4	26	1	RELATED..LEQ SOLVE BY ARITH REASON
4	AMEARTF	614	85	6	4	27	1	FUTURE..LEQ SOLVE BY ARITH REASON
4	AMEARTH	614	85	7	4	28	1	HARD..LEQ SOLVE BY ARITH REASON
4	AMEARTX	614	85	8	4	29	1	TEXT EMPHASIS..LEQ SOLVE BY ARITH REASON
4	AMETAEE	614	87	4	30	1	EMPHASIZED..LEQ SOLVE BY TRIAL ERROR	
4	AMETAET	614	88	4	31	1	IN TEXT..LEQ SOLVE BY TRIAL ERROR	
4	AMETAEK	614	89	1	4	32	1	KNOWN..LEQ SOLVE BY TRIAL ERROR
4	AMETAES	614	89	2	4	33	1	SYLLABUS..LEQ SOLVE BY TRIAL ERROR
4	AMETAEU	614	89	3	4	34	1	UNDERSTAND..LEQ SOLVE BY TRIAL ERROR
4	AMETAEL	614	89	4	4	35	1	LIKED..LEQ SOLVE BY TRIAL ERROR
4	AMETAER	614	89	5	4	36	1	RELATED..LEQ SOLVE BY TRIAL ERROR
4	AMETAEF	614	89	6	4	37	1	FUTURE..LEQ SOLVE BY TRIAL ERROR
4	AMETAEH	614	89	7	4	38	1	HARD..LEQ SOLVE BY TRIAL ERROR
4	AMETAEX	614	89	8	4	39	1	TEXT EMPHASIS..LEQ SOLVE BY TRIAL ERROR
4	AMERULE	614	91	4	40	1	EMPHASIZED..LEQ SOLVE BY RULES	
4	AMERULT	614	92	4	41	1	IN TEXT..LEQ SOLVE BY RULES	
4	AMERULK	614	93	1	4	42	1	KNOWN..LEQ SOLVE BY RULES
4	AMERULS	614	93	2	4	43	1	SYLLABUS..LEQ SOLVE BY RULES
4	AMERULU	614	93	3	4	44	1	UNDERSTAND..LEQ SOLVE BY RULES
4	AMERULL	614	93	4	4	45	1	LIKED..LEQ SOLVE BY RULES



4	AMERULR	614	93	5	4	46	1	RELATED..LEQ SOLVE BY RULES
4	AMERULF	614	93	6	4	47	1	FUTURE..LEQ SOLVE BY RULES
4	AMERULH	614	93	7	4	48	1	HARD..LEQ SOLVE BY RULES
4	AMERULX	614	93	8	4	49	1	TEXT EMPHASIS..LEQ SOLVE BY RULES
4	AMFTERM	614	95	4	50	1		FORMULAS..EXPLAIN MEANING OF TERMS
4	AMFGRPH	614	96	4	51	1		FORMULAS..INSPECT GRAPHS FIND FORMULAS
4	AMFDDEV	614	97	4	52	1		FORMULAS..PROVIDE DATA DEVELOP FORMULAS
4	AMFDCOL	614	98	4	53	1		FORMULAS..STUDENTS COLLECT DATA
4	AMFNEWF	614	99	4	54	1		FORMULAS..STUDENTS CREATE NEW FORMULAS
4	AAAGE	614	100	4	55	1		PROBLEM TYPE..AGE
4	AADIGIT	614	101	4	56	1		PROBLEM TYPE..DIGIT
4	AAMIX	614	102	4	57	1		PROBLEM TYPE..MIXTURE
4	AAPCT	614	103	4	58	1		PROBLEM TYPE..PERCENT
4	AADRT	614	104	4	59	1		PROBLEM TYPE..DISTANCE RATE TIME
4	AAINST	614	105	4	60	1		PROBLEM TYPE..INTEREST
4	AAAREAV	614	106	4	61	1		PROBLEM TYPE..AREA VOLUME
4	AAPHY	614	107	4	62	1		PROBLEM TYPE..PHYSICAL NATURAL SCIENCE
4	AAENRGY	614	108	4	63	1		PROBLEM TYPE..ENERGY OR ECOLOGY
4	AUTEXT	614	109	4	64	1		PROBLEM SOURCE..STUDENT TEXTBOOK
4	AUSTEXT	614	110	4	65	1		PROBLEM SOURCE..SUPPLEMENTARY BOOKS
4	AULOCAL	614	111	4	66	1		PROBLEM SOURCE..LOCAL MATERIALS
4	AUGUIDE	614	112	4	67	1		PROBLEM SOURCE..GUIDE OR SYLLABUS
4	AUPPUB	614	113	4	68	1		PROBLEM SOURCE..PROF ASSN PUBLICATIONS
4	AUSTDS	614	114	4	69	1		PROBLEM SOURCE..STUDENT SUGGESTIONS
4	AUREALW	614	115	4	70	1		PROBLEM SOURCE..REAL WORLD
4	APSIZE	614	116	4	71	3		AVERAGE LENGTH OF MATH CLASS MINUTES
4	APITOT	614	117	4	74	3		PERIODS..TOTAL INTEGERS AND INTEGER OPS
15	4	REFERS TO	TOTAL TIME	IN	ALGEBRA			
4	APIPN	614	118	4	77	2		PERIODS..CONCEPT OF POS AND NEG INTEGERS
4	APIADD	614	119	4	79	2		PERIODS..ADDITION OF INTEGERS
4	APISUB	614	120	5	20	2		PERIODS..SUBTRACTION OF INTEGERS
4	APIMUL	614	121	5	22	2		PERIODS..MULTIPLICATION OF INTEGERS
4	APIDIV	614	122	5	24	2		PERIODS..DIVISION OF INTEGERS
4	APISTRC	614	123	5	26	2		PERIODS..STRUCTURAL PROPS OF INTEGER SET
4	APIORD	614	124	5	28	2		PERIODS..ORDER RELATIONS OF INTEGERS
4	APIAPPL	614	125	5	30	2		PERIODS..INTEGER APPLICATIONS
4	APETOT	614	126	5	32	3		PERIODS..TOTAL FORMULAS AND EQUATIONS
4	APEEVAL	614	127	5	35	2		PERIODS..EVLUATION OF FORMULAS
4	APEDERV	614	128	5	37	2		PERIODS..DERIVING FORMULAS OR EQUATIONS
4	APEAPPF	614	129	5	39	2		PERIODS..APPLICATIONS OF FORMULAS
4	APESLIT	614	130	5	41	2		PERIODS..SOLVING LITERAL EQUATIONS
4	APESLIN	614	131	5	43	2		PERIODS..SOLVING LINEAR EQUATIONS
4	APEAPPE	614	132	5	45	2		PERIODS..APPLICATIONS OF EQUATIONS
4	AOILINE	614	133	5	47	1		OPINION..NUMBER LINE ADDS TO INTEGERS
4	AOIRULE	614	134	5	48	1		OPINION..JUSTIFY RULE FOR MULTIPLY INTS
4	AODNUMS	614	135	5	49	1		OPINION..PRACTICE OPS FOR DIRECTED NUMS
4	AOILAWS	614	136	5	50	1		OPINION..IMPORTANT UNDERSTAND INT LAWS
4	AOIWHY	614	137	5	51	1		OPINION..WANT KNOW WHY INT OP RULES WORK
4	AOISTRC	614	138	5	52	1		OPINION..WHY IMPORT INT STRUCTURAL PROPS
4	AOLETTR	614	139	5	53	1		OPINION..SLOW USE LETTERS FOR UNKNOWNNS
4	AOSOLUT	614	140	5	54	1		OPINION..LEQ WITH FRACTION SOL HARDER
4	AOESTEP	614	141	5	55	1		OPINION..JUSTIFY EACH EQUATION SOL STEP
4	AOETAE	614	142	5	56	1		OPINION..SOLVE EQUATIONS BY TRIAL ERROR
4	AOSSET	614	143	5	57	1		OPINION..SOLUTION SET NOTION HELPS
4	AOEWP	614	144	5	58	1		OPINION..WORD PROBS LINEAR EQS ARE HARD
4	AOTRANS	614	145	5	59	1		OPINION..HARD TO TRANSLATE WORDS MATH
4	AOEAPPL	614	146	5	60	1		OPINION..APPS WITH LINEAR EQS ARE HARD
4	AOPTYPE	614	147	5	61	1		OPINION..FIRST IDENTIFY TYPE OF PROBLEM
4	AOEJUST	614	148	5	62	1		OPINION..BAD TO JUSTIFY STEPS IN EQ SOL
4	AOEQIVE	614	149	5	63	1		OPINION..EQUIV EQUATION NOTION USEFUL
4	AOFMEM	614	150	5	64	1		OPINION..FORMULAS SHOULD BE MEMORIZED

4	AOFORSP	614	151		5	65	1	OPINION..FORMULAS FOR STORY PROBLEMS	
4	AOFORGF	614	152		5	66	1	OPINION..FORMULAS FOR VOLUMES ETC	
4	AOFORPR	614	153		5	67	1	OPINION..FORMULAS IN PRACTICAL APPS	
4	COBJLOG	615		1	A	1	20	1	OBJECTIVE..LOGICAL STRUCTURE OF MATH
4	COBJPRF	615		1	B	1	21	1	OBJECTIVE..THE NATURE OF PROOF
4	COBJINT	615		1	C	1	22	1	OBJECTIVE..INTEREST IN MATHEMATICS
4	COBJKNW	615		1	D	1	23	1	OBJECTIVE..KNOW MATH FACTS, ETC.
4	COBJINQ	615		1	E	1	24	1	OBJECTIVE..ATTITUDE OF INQUIRY
4	COBJLIF	615		1	F	1	25	1	OBJECTIVE..AWARENESS OF MATH IN LIFE
4	COBJCOM	615		1	G	1	26	1	OBJECTIVE..COMPUTATION SPEED ACCURACY
4	COBJSCI	615		1	H	1	27	1	OBJECTIVE..AWARENESS OF MATH IN SCIENCE
4	COBJSYS	615		1	I	1	28	1	OBJECTIVE..SYSTEMATIC APPROACH PROBLEMS
4	CSITXTG	615		2	A1	1	29	1	GOALS SOURCE..TEXTBOOK
4	CSITXTP	615		2	A2	1	30	1	PRESENTATION SOURCE..TEXTBOOK
4	CSITXTD	615		2	A3	1	31	1	DRILL SOURCE..TEXTBOOK
4	CSITXTA	615		2	A4	1	32	1	APPLICATIONS SOURCE..TEXTBOOK
4	CSISYLG	615		2	B1	1	33	1	GOALS SOURCE..SYLLABUS
4	CSISYLP	615		2	B2	1	34	1	PRESENTATION SOURCE..SYLLABUS
4	CSISYLD	615		2	B3	1	35	1	DRILL SOURCE..SYLLABUS
4	CSISYLA	615		2	B4	1	36	1	APPLICATIONS SOURCE..SYLLABUS
4	CSIMING	615		2	C1	1	37	1	GOALS SOURCE..MIN COMPETENCIES
4	CSIMINP	615		2	C2	1	38	1	PRESENTATION SOURCE..MIN COMPETENCIES
4	CSIMIND	615		2	C3	1	39	1	DRILL SOURCE..MIN COMPETENCIES
4	CSIMINA	615		2	C4	1	40	1	APPLICATIONS SOURCE..MIN COMPETENCIES
4	CSIEXTG	615		2	D1	1	41	1	GOALS SOURCE..EXTERNAL EXAMS
4	CSIEXTP	615		2	D2	1	42	1	PRESENTATION SOURCE..EXTERNAL EXAMS
4	CSIEXTD	615		2	D3	1	43	1	DRILL SOURCE..EXTERNAL EXAMS
4	CSIEXTA	615		2	D4	1	44	1	APPLICATIONS SOURCE..EXTERNAL EXAMS
4	CSIJRNG	615		2	E1	1	45	1	GOALS SOURCE..JOURNALS, BOOKS
4	CSIJRNP	615		2	E2	1	46	1	PRESENTATION SOURCE..JOURNALS, BOOKS
4	CSIJRND	615		2	E3	1	47	1	DRILL SOURCE..JOURNALS, BOOKS
4	CSIJRNA	615		2	E4	1	48	1	APPLICATIONS SOURCE..JOURNALS, BOOKS
4	CSISLFG	615		2	F1	1	49	1	GOALS SOURCE..BY YOURSELF
4	CSISLFP	615		2	F2	1	50	1	PRESENTATION SOURCE..BY YOURSELF
4	CSISLFD	615		2	F3	1	51	1	DRILL SOURCE..BY YOURSELF
4	CSISLFA	615		2	F4	1	52	1	APPLICATIONS SOURCE..BY YOURSELF
4	CSIOTHG	615		2	G1	1	53	1	GOALS SOURCE..OTHER TEACHERS
4	CSIOTHP	615		2	G2	1	54	1	PRESENTATION SOURCE..OTHER TEACHERS
4	CSIOTHD	615		2	G3	1	55	1	DRILL SOURCE..OTHER TEACHERS
4	CSIOTHA	615		2	G4	1	56	1	APPLICATIONS SOURCE..OTHER TEACHERS
4	CSIPROG	615		2	H1	1	57	1	GOALS SOURCE..PROF MEETINGS
4	CSIPROP	615		2	H2	1	58	1	PRESENTATION SOURCE..PROF MEETINGS
4	CSIPROD	615		2	H3	1	59	1	DRILL SOURCE..PROF MEETINGS
4	CSIPROA	615		2	H4	1	60	1	APPLICATIONS SOURCE..PROF MEETINGS
4	CDWVPUB	615		3	A	1	61	1	DIFFICULTY WITHOUT..PUBLISHED VISUALS
4	CDWVSLF	615		3	B	1	62	1	DIFFICULTY WITHOUT..VISUALS BY YOURSELF
4	CDWPSLF	615		3	C	1	63	1	DIFFICULTY WITHOUT..PROBLEMS BY YOURSELF
4	CDWTPUB	615		3	D	1	64	1	DIFFICULTY WITHOUT..PUBLISHED TESTS
4	CDWADVA	615		3	E	1	65	1	DIFFICULTY WITHOUT..ADVICE FROM ADMIN
4	CDWTSLF	615		3	F	1	66	1	DIFFICULTY WITHOUT..TESTS BY YOURSELF
4	CDWTEXT	615		3	G	1	67	1	DIFFICULTY WITHOUT..PUBLISHED TEXTBOOKS
4	CDWWBK	615		3	H	1	68	1	DIFFICULTY WITHOUT..PUBLISHED WORKBOOKS
4	CDWEXP	615		3	I	1	69	1	DIFFICULTY WITHOUT..EXAMPLES MADE UP
4	CDWSYL	615		3	J	1	70	1	DIFFICULTY WITHOUT..OFFICIAL SYLLABUS
4	CDWMEMM	615		3	K	1	71	1	DIFFICULTY WITHOUT..REMEMBER FROM MATH
4	CDWMEME	615		3	L	1	72	1	DIFFICULTY WITHOUT..REMEMBER FROM EDUC
4	CDWADVT	615		3	M	1	73	1	DIFFICULTY WITHOUT..ADVICE FROM TEACHERS
4	CDWEXAM	615		3	N	1	74	1	DIFFICULTY WITHOUT..KNOWLEDGE OF EXAMS
4	CGRPWHL	615		4	A	1	75	3	WHOLE CLASS WORKING AS A SINGLE GROUP
4	CGRPSMA	615		4	B	1	78	3	SMALL GROUP INSTRUCTION
4	CGRPIND	615		4	C	2	20	3	ALL STUDENTS WORKING INDIVIDUALLY

4	CGRPOTH	615	4	D	2	23	3	OTHER GROUPING ARRANGMENT
4	CSGMAB	615	5	A	2	26	1	MOST ABLE STUDENTS WORK SEPARATELY
4	CSGLAB	615	5	B	2	27	1	LEAST ABLE STUDENTS WORK SEPARATELY
4	CSGMANY	615	5	C	2	28	1	CLASS IS SPLIT INTO THREE OR MORE GROUPS
4	CPACING	615	6		2	29	1	SAME OR VARIED CONTENT OR PACING
4	CDASSGN	615	7		2	30	1	SAME OR VARIED EXERCISES AND PROBLEMS
4	CHDMORE	615	8	A	2	31	1	SOME STUDENTS..MORE EXERCISES
4	CHDHARD	615	8	B	2	32	1	SOME STUDENTS..MORE DIFFICULT EXERCISES
4	CHDTOP	615	8	C	2	33	1	SOME STUDENTS..OTHER TOPICS
4	CPGABIL	615	9	A	2	34	1	PROGRESS..STUDENT LACK OF ABILITY
4	CPGMISB	615	9	B	2	35	1	PROGRESS..STUDENT MISBEHAVIOUR
4	CPGINDF	615	9	C	2	36	1	PROGRESS..STUDENT INDIFFERENCE
4	CPGFEAR	615	9	D	2	37	1	PROGRESS..FEAR OF MATHEMATICS
4	CPGABS	615	9	E	2	38	1	PROGRESS..STUDENT ABSENTEEISM
4	CPGTIME	615	9	F	2	39	1	PROGRESS..INSUFFICIENT SCHOOL TIME
4	CPGPROF	615	9	G	2	40	1	PROGRESS..PROFICIENCY ON YOUR PART
4	CPGLIM	615	9	H	2	41	1	PROGRESS..LIMITED RESOURCES
4	CPGMANY	615	9	I	2	42	1	PROGRESS..TOO MANY STUDENTS
4	CPGOTH	615	9	J	2	43	1	PROGRESS..OTHER REASONS
4	CFEAR	615	10		2	44	1	STUDENTS ESPECIALLY FEARFUL ANXIOUS
4	CTCLASS	615	11		2	45	1	TARGET CLASS EASY OR DIFFICULT TO TEACH
4	CTMATH	615	12		2	46	1	DO YOU FIND MATH EASY DIFFICULT TO TEACH
4	CTCATT	615	13	A	2	47	3	TARGET CLASS..ATTENTIVE
4	CTCNATT	615	13	B	2	50	3	TARGET CLASS..NOT ATTENTIVE
4	CTCBEHV	615	13	C	2	53	3	TARGET CLASS..BEHAVIOUR PROBLEMS
4	CTCOTH	615	13	D	2	56	3	TARGET CLASS..OTHER KINDS
4	CETALK	615	14	1	2	59	1	RATING..TALK TO INDIVIDUAL STUDENTS
4	CECOMPT	615	14	2	2	60	1	RATING..STIMULATE COMPETITION
4	CESIMP	615	14	3	2	61	1	RATING..GIVE LESS ABLE SIMPLE ASSGNMNTS
4	CEPRSE	615	14	4	2	62	1	RATING..PRAISE STUDENTS WHO ARE CORRECT
4	CETRAN	615	14	5	2	63	1	RATING..PLAN TRANSITIONS
4	CERMRK	615	14	6	2	64	1	RATING..MAKE ENCOURAGING REMARKS
4	CECHNG	615	14	7	2	65	1	RATING..CHANGE ACTIVITY IF NO ATTENTION
4	CEHPROB	615	14	8	2	66	1	RATING..MORE ABLE GET HARDER PROBLEMS
4	CECORRF	615	14	9	2	67	1	RATING..IMMEDIATELY CORRECT FALSE STATMNTS
4	CESUM	615	14	10	2	68	1	RATING..SUMMARIZE AT END OF PERIOD
4	CESTRC	615	14	11	2	69	1	RATING..PRESENT HIGHLY STRUCTURED
4	CEACT	615	14	12	2	70	1	RATING..ACTION TO DEAL WITH DISCOMFORT
4	CERULE	615	14	13	2	71	1	RATING..CLEAR-CUT RULES FOR BEHAVIOUR
4	CEVARY	615	14	14	2	72	1	RATING..VARY THE DIFFICULTY OF QUESTIONS
4	CEFEEED	615	14	15	2	73	1	RATING..FREQUENT INDIVIDUAL FEEDBACK
4	CEPREV	615	14	16	2	74	1	RATING..CLEAR UP PREVIOUS PROBLEMS
4	CEWARM	615	14	17	2	75	1	RATING..WARM, PERSONAL RELATIONSHIPS
4	CELONG	615	14	18	2	76	1	RATING..ALLOW DISCUSSIONS TO GO LONGER
4	CEDSCV	615	14	19	2	77	1	RATING..OPPORTUNITY FOR DISCOVERY
4	CERDY	615	14	20	2	78	1	RATING..GET READY BEFORE CLASS
4	CEOUTLN	615	14	21	2	79	1	RATING..AT BEGINNING OUTLINE CONTENT
4	CELVLY	615	14	22	2	80	1	RATING..MAKE PRESENTATIONS LIVELY
4	CEANTCQ	615	14	23	3	20	1	RATING..TRY TO ANTICIPATE QUESTIONS
4	CECRIT	615	14	24	3	21	1	RATING..AVOID CRITICAL ABOUT ANSWERS
4	CECALL	615	14	25	3	22	1	RATING..CALL ON WHO DO NOT VOLUNTEER
4	CESPWK	615	14	26	3	23	1	RATING..DETERMINE SPECIFIC WEAKNESSES
4	CECMNT	615	14	27	3	24	1	RATING..WRITE MEANINGFUL COMMENTS
4	CEGIRLS	615	14	28	3	25	1	RATING..SPECIAL ENCOURAGEMENT TO GIRLS
4	CEFOOL	615	14	29	3	26	1	RATING..INTERVENE WHEN FOOLING AROUND
4	CESAYGD	615	14	30	3	27	1	RATING..SAY SOMETHING GOOD ABOUT ANSWERS
4	CEVRTY	615	14	31	3	28	1	RATING..CHANGE FOR SAKE OF VARIETY
4	CETRDIF	615	14	32	3	29	1	RATING..SOME TRULY DIFFICULT PROBLEMS
4	CERTVST	615	14	33	3	30	1	RATING..REVIEW TESTS AFTER GRADING
4	CEFORST	615	14	34	3	31	1	RATING..FORSTALL STUDENT DISTURBANCES
4	CEKND0	615	14	35	3	32	1	RATING..STUDENTS KNOW WHAT SHOULD DO



5	XZ54G2	1	57	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54G3	1	58	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54H1	1	59	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54H2	1	60	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54H3	1	61	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54I1	1	62	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54I2	1	63	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54I3	1	64	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54J1	1	65	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54J2	1	66	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54J3	1	67	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54K1	1	68	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54K2	1	69	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54K3	1	70	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54L1	1	71	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54L2	1	72	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54L3	1	73	1	UNKNOWN
	54 6	Unknown (1-5)			
5	XZ54M1	1	74	2	UNKNOWN
	54 6	Unknown coding			
5	XZ54N1	1	76	2	UNKNOWN
	54 6	Unknown coding			
5	XZ54N2	1	78	2	UNKNOWN
	54 6	Unknown coding			
5	YSEX	520	1	1 20 1	1 ARE YOU A GIRL OR A BOY
5	YAGE	520	2	1 21 3	2 WHAT IS YOUR AGE IN MONTHS
5	YOLDSIB	520	3	1 24 2	HOW MANY OLDER BROTHERS AND SISTERS
	22 0	Not used			
	54 0	Not used			
5	YFOCCN	520	4	A 1 26 1	3 FATHERS OCCUPATION NATIONAL CODE
	22 0	Not used			
5	YFOCCI	520	4	B 1 27 1	3 FATHERS OCCUPATION INTERNATIONAL CODE
	25 1	Unknown recoding from national code			
	54 3	There are zeros coded			
5	YMWOK	520	5	A 1 28 1	4 DOES MOTHER HAVE OCCUPATION
5	YMOCCN	520	5	B 1 29 1	4 MOTHERS OCCUPATION NATIONAL CODE
	22 0	Not used			
5	YMOCCI	520	5	C 1 30 1	4 MOTHERS OCCUPATION INTERNATIONAL CODE
	15 1	Unknown recoding from national code			
	54 3	There are zeros coded			
5	YFEDUC	520	6	1 31 1	5 FATHERS HIGHEST EDUCATION ATTAINED
	15 3	Added codes 4=tertiary non univ, 5=university			
5	YMEDUC	520	7	1 32 1	6 MOTHERS HIGHEST EDUCATION ATTAINED
	15 3	Added codes 4=tertiary non univ, 5=university			
5	YHOMLAN	520	8	1 33 1	7 DO PARENTS SPEAK LANGUAGE OF INSTRUCTION

54 0	Not used
5 YMOREED	520 9 1 34 1 8 YEARS MORE EDUCATION EXPECTED
25 3	Did not allow alternative 1 for 0 more years, so coded 1-4?
54 3	No code 1 for 0 more years?
81 3	No code 1 for 0 more years?
5 YMHWKL	520 10 1 1 35 2 9 LAST WEEK..HOURS MATH HOMEWORK
5 YMHWKT	520 10 2 1 37 2 9 TYPICAL WEEK..HOURS MATH HOMEWORK
5 YAHWKL	520 11 1 1 39 2 10 LAST WEEK..HOURS ALL HOMEWORK
5 YAHWKT	520 11 2 1 41 2 10 TYPICAL WEEK..HOURS ALL HOMEWORK
5 YTUTORL	520 12 1 1 43 2 11 LAST WEEK..EXTRA MATHEMATICS TUTORING
5 YTUTORT	520 12 2 1 45 2 11 TYPICAL WEEK..EXTRA MATHEMATICS TUTORING
5 YFAMILY	520 13 1 47 1 12 HOW FREQUENT FAMILY HELP
5 YABACUS	520 14 A 1 48 1 13 USE OF ABACUS SOROBAN
22 0	Not used
5 YSLIDE	520 14 B 1 49 1 13 USE OF SLIDE RULE
22 1	Unreliable recoding of quite different question?
5 YFFCALC	520 14 C 1 50 1 13 USE OF FOUR-FUNCTION CALCULATOR
22 1	Unreliable recoding of quite different question?
5 YPPCALC	520 14 D 1 51 1 13 USE OF SCIENTIFIC PROGRAMMED CALCULATOR
22 1	Unreliable recoding of quite different question?
25 4	Question was asked about scientific calculator only.
54 2	Responses imputed from separate scientific/programmed questions
5 YCOMPTR	520 14 E 1 52 1 13 USE OF PERSONAL COMPUTER OR TERMINAL
22 1	Unreliable recoding of quite different question?
22 4	Question was asked about a programmable calculator.
5 YCALCHK	520 15 A 1 53 1 14 CALCULATOR USE FOR CHECKING ANSWERS
22 1	Unreliable recoding of quite different question?
79 3	Computer alternative not included
5 YCALSLV	520 15 B 1 54 1 14 CALCULATOR USE FOR SOLVING PROBLEMS
22 1	Unreliable recoding of quite different question?
79 3	Computer alternative not included
5 YCALTST	520 15 C 1 55 1 14 CALCULATOR USE FOR TAKING TESTS
22 1	Unreliable recoding of quite different question?
79 3	Computer alternative not included
5 YCALPRJ	520 15 D 1 56 1 14 CALCULATOR USE AS AID IN DOING PROJECTS
22 1	Unreliable recoding of quite different question?
79 3	Computer alternative not included
5 YCALREC	520 15 E 1 57 1 14 CALCULATOR USE FOR RECREATION
22 1	Unreliable recoding of quite different question?
79 3	Computer alternative not included
5 YCALHKW	520 15 F 1 58 1 14 CALCULATOR USE TO DO HOMEWORK
22 1	Unreliable recoding of quite different question?
79 3	Computer alternative not included
5 YFLIKES	520 16 1 59 1 1 15 FATHER SEEMS TO ENJOY DOING MATHEMATICS
5 YMLIKES	520 17 1 60 1 1 15 MOTHER SEEMS TO ENJOY DOING MATHEMATICS
5 YFABLE	520 18 1 61 1 1 15 FATHER ABLE TO DO MY MATH HOMEWORK
5 YMABLE	520 19 1 62 1 1 15 MOTHER ABLE TO DO MY MATH HOMEWORK
5 YPINT	520 20 1 63 1 1 15 PARENTS INTERESTED HELPING ME WITH MATH
5 YMIMPT	520 21 1 64 1 1 15 MOTHER THINKS MATH IMPORTANT FOR ME
5 YFIMPT	520 22 1 65 1 1 15 FATHER THINKS MATH IMPORTANT FOR ME
5 YPENC	520 23 1 66 1 1 15 PARENTS ENCOURAGE ME TO LEARN MATH
5 YPWANT	520 24 1 67 1 1 15 PARENTS WANT ME TO DO WELL IN MATH
5 YCHKI	520 25 1 2 20 1 2 16 IMPORTANT..CHECKING AN ANSWER
5 YCHKE	520 25 2 2 21 1 2 16 EASY..CHECKING AN ANSWER
5 YCHKL	520 25 3 2 22 1 2 16 LIKE..CHECKING AN ANSWER
5 YMEMI	520 26 1 2 23 1 2 17 IMPORTANT..MEMORIZING RULES FORMULAS
5 YMEME	520 26 2 2 24 1 2 17 EASY..MEMORIZING RULES FORMULAS
5 YMEML	520 26 3 2 25 1 2 17 LIKE..MEMORIZING RULES FORMULAS
5 YCHRTI	520 27 1 2 26 1 2 18 IMPORTANT..USING CHARTS GRAPHS
5 YCHRTE	520 27 2 2 27 1 2 18 EASY..USING CHARTS GRAPHS
5 YCHRTL	520 27 3 2 28 1 2 18 LIKE..USING CHARTS GRAPHS

5 YWPI	520	28	1	2	29	1	2	19	IMPORTANT..SOLVING WORD PROBLEMS
5 YWPE	520	28	2	2	30	1	2	19	EASY..SOLVING WORD PROBLEMS
5 YWPL	520	28	3	2	31	1	2	19	LIKE..SOLVING WORD PROBLEMS
5 YEQUAI	520	29	1	2	32	1	2	20	IMPORTANT..SOLVING EQUATIONS
5 YEQUAE	520	29	2	2	33	1	2	20	EASY..SOLVING EQUATIONS
5 YEQUAL	520	29	3	2	34	1	2	20	LIKE..SOLVING EQUATIONS
5 YINEQI	520	30	1	2	35	1	2	21	IMPORTANT..SOLVING INEQUALITIES
79 4									Unreliable because of different wording?
5 YINEQE	520	30	2	2	36	1	2	21	EASY..SOLVING INEQUALITIES
79 4									Unreliable because of different wording?
5 YINEQL	520	30	3	2	37	1	2	21	LIKE..SOLVING INEQUALITIES
79 4									Unreliable because of different wording?
5 YGEOMI	520	31	1	2	38	1	2	22	IMPORTANT..LEARNING GEOMETRIC FIGURES
5 YGEOME	520	31	2	2	39	1	2	22	EASY..LEARNING GEOMETRIC FIGURES
5 YGEOML	520	31	3	2	40	1	2	22	LIKE..LEARNING GEOMETRIC FIGURES
5 YESTI	520	32	1	2	41	1	2	23	IMPORTANT..ESTIMATING ANSWERS
5 YESTE	520	32	2	2	42	1	2	23	EASY..ESTIMATING ANSWERS
5 YESTL	520	32	3	2	43	1	2	23	LIKE..ESTIMATING ANSWERS
5 YRATI	520	33	1	2	44	1	2	24	IMPORTANT..LEARNING RATIO PROPORTION
5 YRATE	520	33	3	2	45	1	2	24	EASY..LEARNING RATIO PROPORTION
5 YRATL	520	33	3	2	46	1	2	24	LIKE..LEARNING RATIO PROPORTION
5 YDECI	520	34	1	2	47	1	2	25	IMPORTANT..DECIMAL FRACTION PROBLEMS
5 YDECE	520	34	2	2	48	1	2	25	EASY..DECIMAL FRACTION PROBLEMS
5 YDECL	520	34	3	2	49	1	2	25	LIKE..DECIMAL FRACTION PROBLEMS
5 YSETSI	520	35	1	2	50	1	2	26	IMPORTANT..WORKING WITH SETS
5 YSETSE	520	35	2	2	51	1	2	26	EASY..WORKING WITH SETS
5 YSETSL	520	35	3	2	52	1	2	26	LIKE..WORKING WITH SETS
5 YMEASI	520	36	1	2	53	1	2	27	IMPORTANT..LEARNING UNITS OF MEASURE
5 YMEASE	520	36	2	2	54	1	2	27	EASY..LEARNING UNITS OF MEASURE
5 YMEASL	520	36	3	2	55	1	2	27	LIKE..LEARNING UNITS OF MEASURE
5 YDRAWI	520	37	1	2	56	1	2	28	IMPORTANT..DRAWING GEOMETRIC FIGURES
5 YDRAWE	520	37	2	2	57	1	2	28	EASY..DRAWING GEOMETRIC FIGURES
5 YDRAWL	520	37	3	2	58	1	2	28	LIKE..DRAWING GEOMETRIC FIGURES
5 YSTATI	520	38	1	2	59	1	2	29	IMPORTANT..STATISTICAL TABLES
5 YSTATE	520	38	2	2	60	1	2	29	EASY..STATISTICAL TABLES
5 YSTATL	520	38	3	2	61	1	2	29	LIKE..STATISTICAL TABLES
5 YFIGI	520	39	1	2	62	1	2	30	IMPORTANT..COMPARING GEOMETRIC FIGURES
5 YFIGE	520	39	2	2	63	1	2	30	EASY..COMPARING GEOMETRIC FIGURES
5 YFIGL	520	39	3	2	64	1	2	30	LIKE..COMPARING GEOMETRIC FIGURES
5 YFUNCAL	520	40							3 20 1 8 80 WORD PROBLEMS MORE FUN WITH CALCULATOR
25 2									Question was, Everyone should learn about computers
5 YGOWO	520	41							3 21 1 7 73 I CAN GET ALONG WELL WITHOUT MATHEMATICS
5 YUSTAND	520	42							3 22 1 4 50 I USUALLY UNDERSTAND MATH CLASS
5 YWRKLN	520	43							3 23 1 4 59 I WILL WORK TO UNDERSTAND MATH IDEA
5 YNOTNEC	520	44							3 24 1 7 76 MATH NOT NECESSARY IN MOST OCCUPATIONS
5 YIWANT	520	45							3 25 1 4 46 I WANT TO DO WELL IN MATHEMATICS
5 YJOBUSE	520	46							3 26 1 7 71 I WOULD LIKE JOB THAT LETS ME USE MATH
5 YNONEW	520	47							3 27 1 3 42 NO NEW MATH DISCOVERIES FOR A LONG TIME
25 4									Included the qualification, probably
5 YMTHLOG	520	48							3 28 1 3 45 MATHEMATICS HELPS ONE THINK LOGICALLY
5 YFLGOOD	520	49							3 29 1 4 49 I FEEL GOOD WHEN I SOLVE A MATH PROBLEM
5 YNOCOMP	520	50							3 30 1 8 78 CALCULATOR MEANS NOT HAVE LEARN COMPUTE
25 4									Question was, Someday computers will run everything
5 YBORING	520	51							3 31 1 8 82 COMPUTERS MAKES LEARNING MATH BORING
25 4									Question was, Math ideas can be learned faster with calculator
5 YNONEED	520	52							3 32 1 7 75 MATHEMATICS NOT NEEDED EVERYDAY LIVING
5 YPWELL	520	53							3 33 1 4 47 MY PARENTS WANT ME TO DO WELL IN MATH
5 YFUN	520	54							3 34 1 5 63 I THINK MATHEMATICS IS FUN
5 YALLCMP	520	55							3 35 1 8 83 EVERYONE SHOULD LEARN ABOUT COMPUTERS
25 4									Question was, If use calculator, don't have to learn to compute
5 YCHANGE	520	56							3 36 1 3 31 MATH WILL CHANGE RAPIDLY NEAR FUTURE

5 YWOMCAR 520 57 3 37 1 6 68 A WOMAN NEEDS A CAREER AS MUCH AS MAN  
5 YALWRUL 520 58 3 38 1 3 41 ALWAYS A RULE IN SOLVING A MATH PROBLEM  
5 YSCARED 520 59 3 39 1 5 61 IT SCARES ME TO HAVE TO TAKE MATHEMATICS  
5 YMTHJOB 520 60 3 40 1 7 69 MATH IS IMPORTANT TO GET A GOOD JOB  
15 0 Not used  
25 4 Referred to arithmetic rather than mathematics  
5 YNEVER 520 61 3 41 1 4 57 I COULD NEVER BE A GOOD MATHEMATICIAN  
5 YHELPO 520 62 3 42 1 4 52 I LIKE TO HELP OTHERS WITH MATH PROBLEMS  
5 YHAPPY 520 63 3 43 1 5 60 WORKING WITH NUMBERS MAKES ME HAPPY  
5 YTAESLV 520 64 3 44 1 3 40 TRIAL AND ERROR CAN OFTEN BE USED  
5 YCMPSLV 520 65 3 45 1 8 81 COMPUTERS SOLVE BETTER THAN PEOPLE DO  
25 2 Question was, Using hand calc make it more fun solve math probs  
5 YING 520 66 3 46 1 4 51 I AM NOT SO GOOD AT MATHEMATICS  
5 YCHALL 520 67 3 47 1 4 54 I FEEL CHALLENGED BY DIFFICULT MATH  
5 YMEMRZG 520 68 3 48 1 3 38 LEARNING MATHEMATICS MOSTLY MEMORIZING  
5 YINMAZE 520 69 3 49 1 5 64 WHEN CANNOT FIGURE FEEL LOST IN A MAZE  
5 YWORULE 520 70 3 50 1 3 39 MATH PROBLEMS BE SOLVED WITHOUT RULES  
5 YMORMTH 520 71 3 51 1 4 48 LOOKING FORWARD TO TAKING MORE MATH  
5 YCOMPOK 520 72 3 52 1 8 84 COMPUTERS DO GOOD THINGS FOR PEOPLE  
25 4 Question was,  
5 YCREATE 520 73 3 53 1 3 32 MATH IS A GOOD FIELD FOR CREATIVE PEOPLE  
5 YNOTWLL 520 74 3 54 1 4 58 NOT WELL IN MATH HOWEVER HARD I TRY  
5 YLSSFUN 520 75 3 55 1 8 77 LESS FUN TO LEARN MATH IF USE CACULATOR  
25 2 Question was, Computer can Think  
5 YHARDER 520 76 3 56 1 4 56 MATH IS HARDER FOR ME THAN MOST PERSONS  
5 YMENBET 520 77 3 57 1 6 65 MEN MAKE BETTER SCIENTISTS AND ENGINEERS  
5 YUSEDAY 520 78 3 58 1 7 72 MATHEMATICS USEFUL IN EVERYDAY PROBLEMS  
5 YRULES 520 79 3 59 1 3 35 MATH HELPS ONE THINK IN STRICT RULES  
5 YNOTIME 520 80 3 60 1 4 55 I REFUSE TO SPEND MY OWN TIME DOING MATH  
5 YPRACT 520 81 3 61 1 7 74 MOST MATH HAS PRACTICAL USE ON THE JOB  
5 YLTORIG 520 82 3 62 1 3 33 LITTLE PLACE FOR ORIGINALITY IN MATH  
5 YBOYSAB 520 83 3 63 1 6 66 BOYS HAVE MORE NATURAL ABILITY IN MATH  
5 YMTHRUL 520 84 3 64 1 3 43 MATHEMATICS IS A SET OF RULES  
5 YNOUSE 520 85 3 65 1 7 70 MOST PEOPLE DONT USE MATH IN THEIR JOBS  
25 4 Referred to arithmetic rather than mathematics  
5 YESTIMP 520 86 3 66 1 3 36 ESTIMATING IS AN IMPORTANT MATH SKILL  
5 YMNYWYS 520 87 3 67 1 3 37 MANY WAYS TO SOLVE MOST MATH PROBLEMS  
5 YCALM 520 88 3 68 1 5 62 I USUALLY FEEL CALM WHEN DOING MATH  
5 YCALHLP 520 89 3 69 1 8 79 CALCULATOR CAN HELP YOU LEARN MATH TOPIC  
25 4 Question was, Computer make learning math more enjoyable  
5 YBOYSND 520 90 3 70 1 6 67 BOYS NEED MORE MATHEMATICS THAN GIRLS  
5 YNOMORE 520 91 3 71 1 4 53 IF CHOICE I WOULDNT LEARN ANY MORE MATH  
5 YNEWDSC 520 92 3 72 1 3 34 NEW DISCOVERIES IN MATH ARE BEING MADE  
25 0 Not used  
5 YDIFWAY 520 93 3 73 1 3 44 MATH CAN BE SOLVED IN DIFFERENT WAYS  
25 0 Not used

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