

Mad About Math (or "Junior ExSEL")

Ann L. Poe

In August, 1992, I joined the Center for Individualized Instruction (CII) team at Jacksonville State University and was introduced to Precision Teaching. I must admit I was skeptical of Precision Teaching and its learning benefits for students, until I attended the Precision Teaching Conference in March, 1993. Sold on Precision Teaching is an understatement! After returning from the conference, I was eager to put to work what I had learned. At the same time, the CII staff was gearing up for ExSEL, a pilot program to be totally Precision taught for students deficient in reading, writing and quantification skills. The reading and writing courses were designed to use practice sheets with computer-assisted software, while the quantification course would be using the Morningside Model for math fluency.

Connie Williams, an instructor in CII's ExSEL program, and I had talked on many occasions about our children, Katelyn and Rachel. Katelyn and Rachel had not mastered basic math skills in the second grade and were given the assignment of learning the multiplication tables to the 5's during the summer vacation, thus the implementation of "Junior ExSEL"

Subjects

Rachel Poe, my daughter, and Katelyn Williams, Connie's daughter, both 8 years old, had just completed the second grade at different schools. Both girls were "finger counters" when it came to addition and subtraction, but would not admit the need to use their fingers. They needed work on basic addition and subtraction skills, in addition to mastering their multiplication tables. Rachel and Katelyn agreed that math was their least favorite school subject. Both girls were at about the same level in basic math skills of addition and subtraction facts. Before leaving the second grade, neither Rachel nor Katelyn had begun learning the multiplication tables.

Procedures

Rachel and Katelyn attended the ExSEL program five days a week for two hours each day, Monday through Friday, for a six week period. They were included in Data Share on Fridays with the college ExSEL students and were given the opportunity to share their progress for the week. This was one of many positive reinforcers for them. Their participation also helped to motivate the regular ExSEL students, since Rachel and Katelyn would be doing various regular ExSEL practice sheets from the Morningside Model of math fact fluency.

The Standard Celeration Chart was introduced on the first day. In order to make charting easy, "Telling Time" practice sheets, a skill Rachel and Katelyn knew was used for one-minute timings. They were shown how to plot or "drop the dot," as they liked to refer to it, on the Chart. Rachel and Katelyn caught on quickly to charting. Cumulative review addition and subtraction math facts was then introduced. Chris Rosser, a fifth grade student, served as a peer tutor for Rachel and Katelyn during this learning phase. He worked through difficulties that they were having with the various practice sheets on the chalkboard with them. In addition to practice sheets, Rachel and Katelyn were introduced to *Math Blaster*, a computer program using four different types of games with addition and subtraction facts. They worked on the computer daily, in addition to working the practice sheets, and completed a one-minute timing per day on the addition/subtraction practice sheet. Chart 1 and 2 shows their performance on cumulative addition and subtraction math facts.

The Morningside Model teaches multiplication and division facts concurrently. Katelyn's and Rachel's schools teach them as separate math facts. In order to keep them from being confused, and stay within their school's

curriculum, a deviation was made in the Morningside Model, and only multiplication table practice sheets were introduced. Jessica Matheny, a seventh grade student at Jacksonville Middle School, served as their peer tutor for the multiplication sequence. Jessica made-up multiplication practice sheets beginning with "0" to the "5's", with a cumulative review after each two digits mastered. She also devised various math games to help reinforce the multiplication facts they were working on. Chart 3 and 4 shows their performance on multiplication facts.

Results

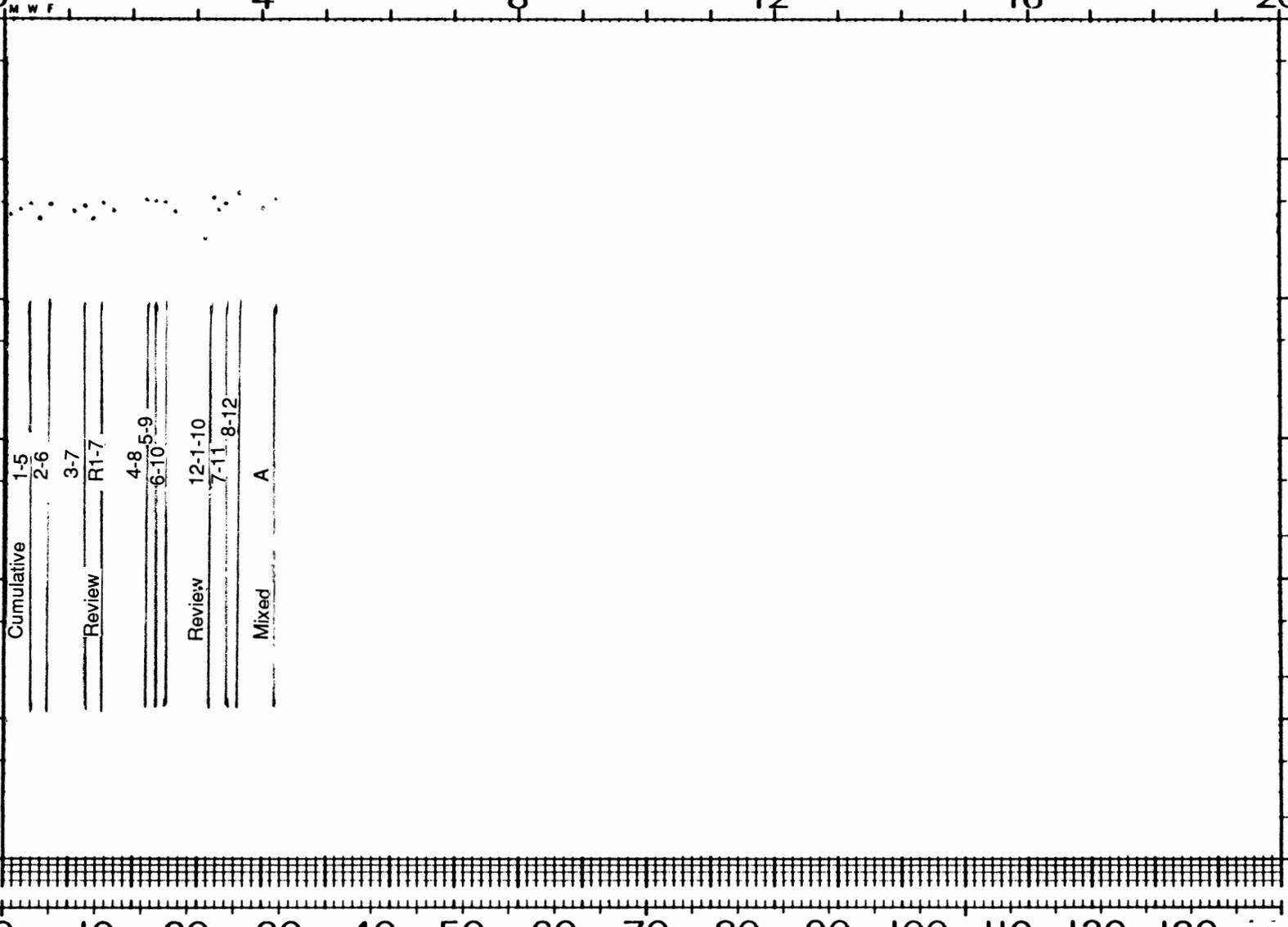
Although Rachel and Katelyn did not complete up to "5's" in multiplication before ExSEL ended, they are no longer "finger counters." Their progress was considered phenomenal for the six week period they participated in the program. Dropping dots on the Chart was fun and challenging for them; they wanted to Chart everything they did. Sharing their progress in Data Share proved to be a good motivational tool, not only for Rachel and Katelyn, but for the ExSEL students as well. As a result of Rachel's and Katelyn's progress this past summer, plans are being made to conduct camp "Mad About Math" in the summer of 1994 for area elementary school children. Stay tuned for more exciting progress and Charts! PT and kids -- a natural learning combination!

CALENDAR WEEKS

21 06 93
DAY MO YR

1000
500
100
50
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0

COUNT PER MINUTE



COUNTING PERIOD FLOORS
MIN HRS

1
2
5
10
20
50
100
200
500
1000
-16
-24

SUCCESSIVE CALENDAR DAYS

Cumulative Addition/Subtraction

A. Poe
SUPERVISOR

C. Rosser
MANAGER

Jacksonville State University
AGENCY

C. Rosser
TIMER

C. Rosser
COUNTER

Rachel
BEHAVIOR

8
AGE

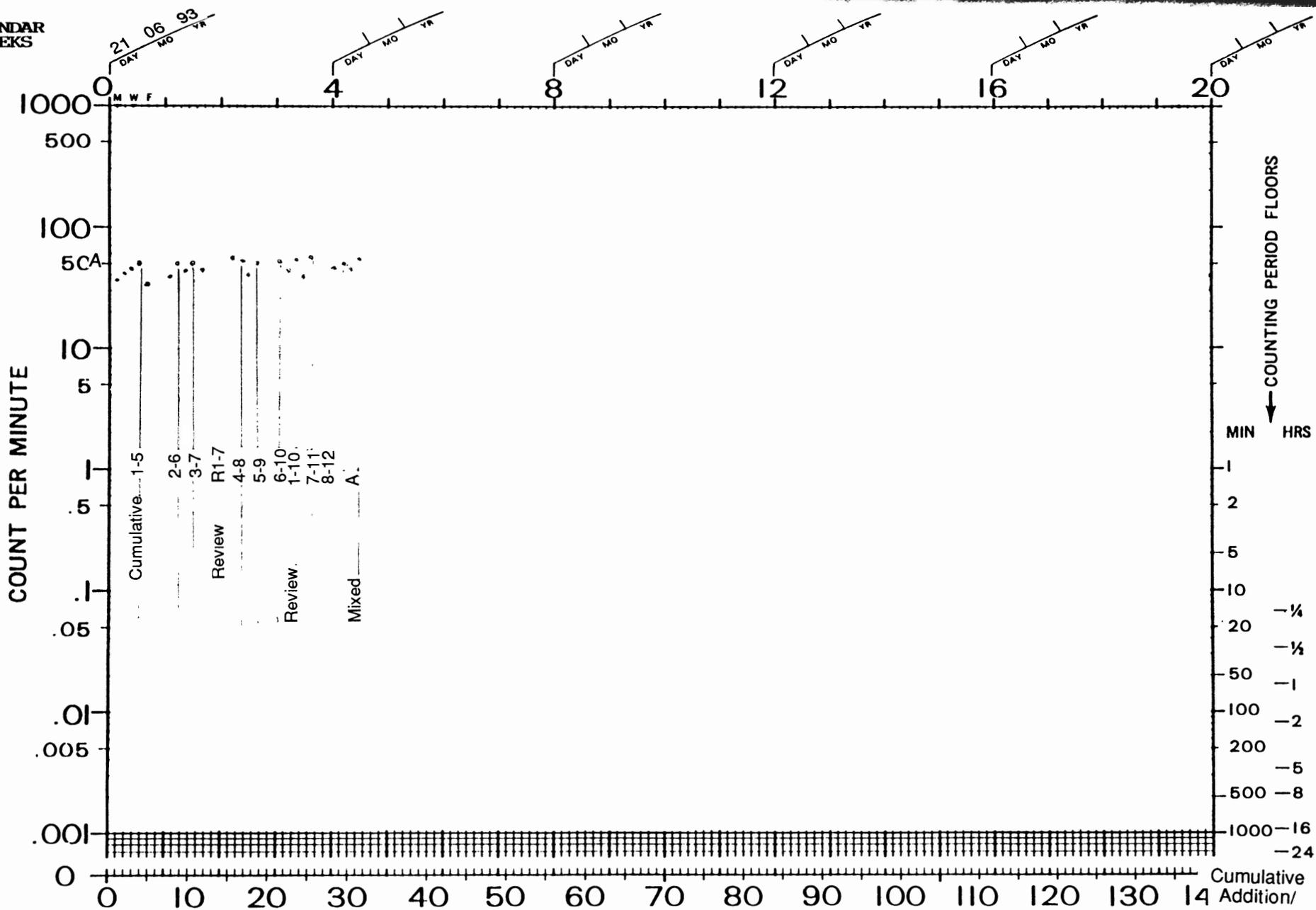
See/ Write
LABEL

Math Facts
COUNTED

Rachel
CHARTER

46

CALENDAR WEEKS



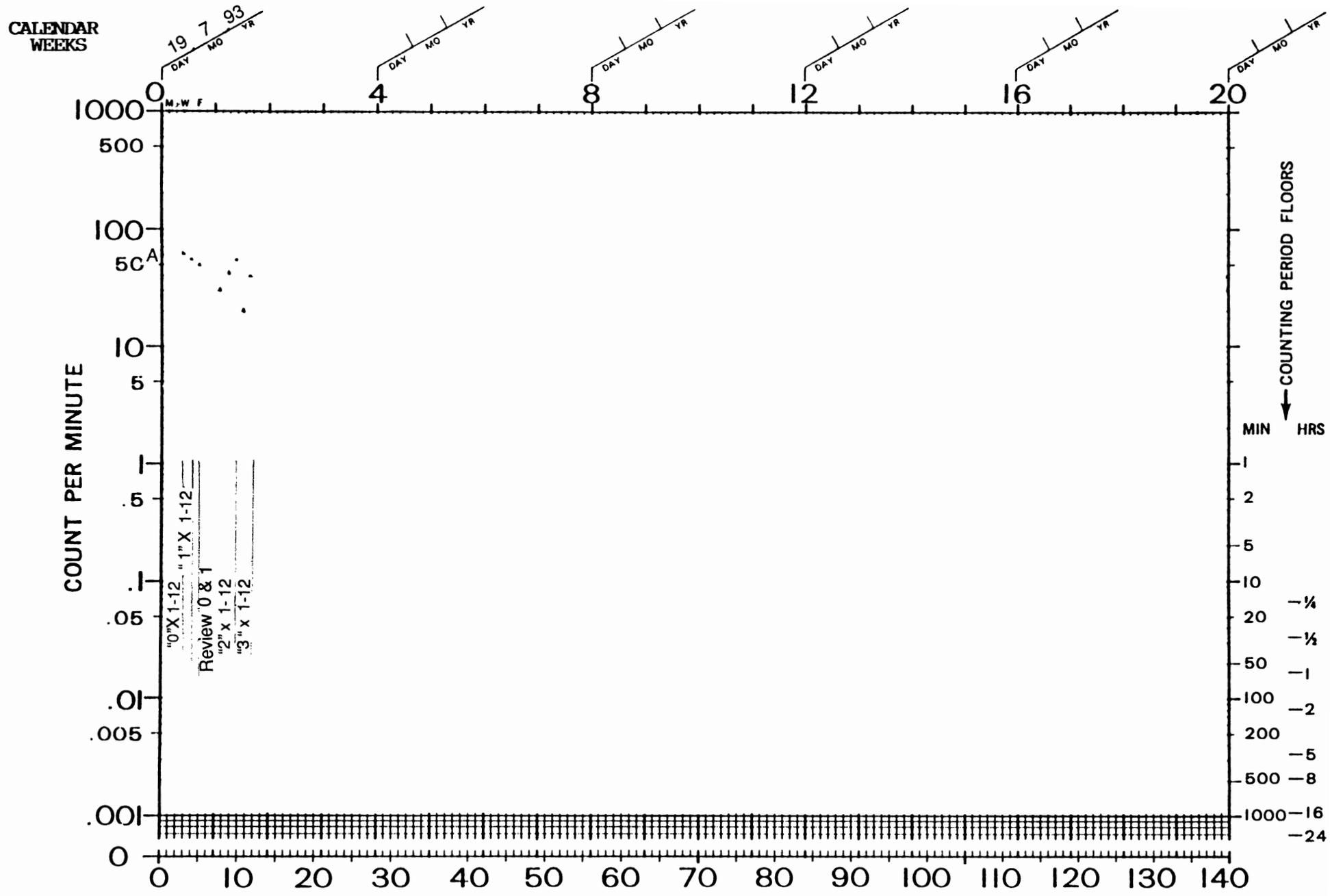
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SUPERVISOR _____
 ADVISER A. Poe
 DEPOSITOR _____
 MANAGER C. Rosser
 AGENCY Jacksonville State University

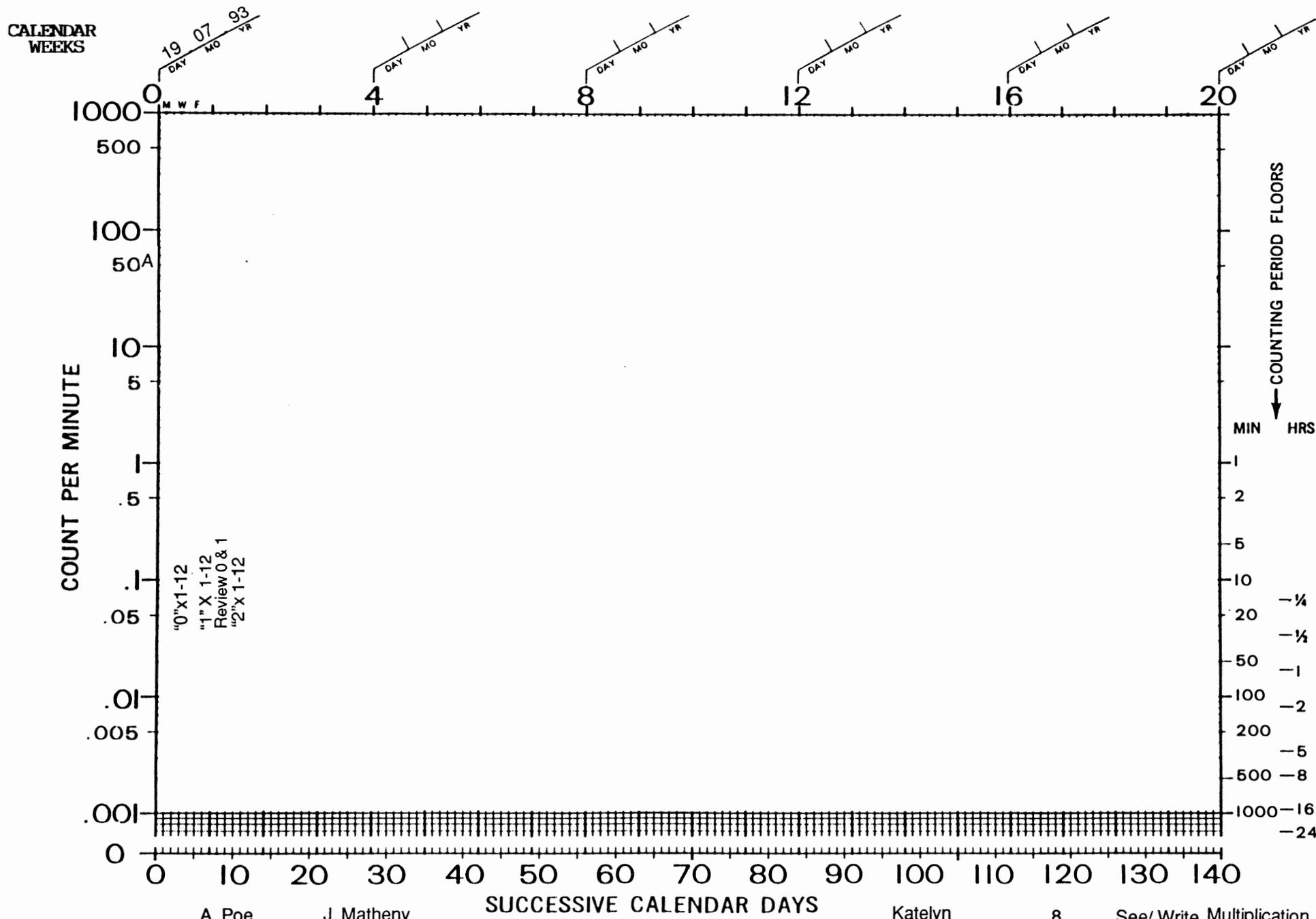
SUCCESSIVE CALENDAR DAYS _____
 TIMER C. Rosser
 COUNTER C. Rosser

BEHAVER Katelyn
 CHARTER _____
 AGE 8
 LABEL See/Write
 COUNTED Math Facts

Cumulative Addition/ Subtraction



A. Poe		Rachel		8	See/Write	Multiplication
SUPERVISOR	ADVISER	MANAGER	BEHAVER	AGE	LABEL	COUNTED
Jacksonville State University		J. Matheny	J. Matheny			
DEPOSITOR	AGENCY	TIMER	COUNTER	CHARTER		



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SUPERVISOR		A. Poe	J. Matheny	Katelyn		8	See/ Write	Multiplication	
		ADVISER	MANAGER	BEHAVER		AGE	LABEL	COUNTED	
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DEPOSITOR		AGENCY		TIMER	COUNTER	CHARTER			
Jacksonville State University				J. Matheny	J. Matheny	Katelyn			