

FOUR STUDENTS AT CONTROLS

Computer Performs in School

By MAX PRICE

Denver Post Staff Writer

"This is a computer . . ."

With these words Randolph (Randy) H. Levine, 16, of 43 S. Hudson St., began an explanation of a Control Data 160A Computer for his fellow students at George Washington High School.

He and three other students—Fred N. Ris, 16, of 635 Eudora St.; Alvin D. Nelson, 17, of 65 S. Madison St., and Robert A. Kahn, 16, of 857 Grape St.—demonstrated how to solve difficult math problems in seconds on the computer.

To the amazement and amusement of students in a mathematics class, the four youths produced answers for homework problems.

The four are acknowledged experts in the use of the 160A Computer. Through the cooperation of the Control Data Corp., 655 Broadway, they have taken courses on computer programming and digital computing methods at the firm's offices.

They were given free use of computers to obtain experience in operating the complicated equipment. This was followed by a seminar in which the instructor posed problems for them to analyze and solve.

A \$90,000 computer was sent to George Washington High School by Control Data Corp. for demonstrations in math and science classes.

The four students, under direction of math teacher Irwin J. Hoffman, put the computer through its intricate paces. On hand for a demonstration was Robert L. Albrecht, Control Data applications analyst, who has worked closely with the students in computer courses.

He estimated that about \$20,000 worth of time—based on the

computer rental fee—has been set aside by Control Data for area high school students. Students from Abraham Lincoln High School and five Jefferson County public schools have taken introductory computer courses, in addition to students from George Washington.

Hoffman and Albrecht agreed that problem-solving through use of computers gives students a

deeper insight into math and encourages them toward self-education in the subject.

The four George Washington students have become so skilled in use of the 160A Computer that they are establishing a class of their own for fellow students.

Randy, Fred, Alvin and Robert plan to start the computer class during spring vacation.



Denver Post Photo by Bill Peters

STUDENTS WORK MATH PROBLEMS ON COMPUTER

From left are Robert A. Kahn, Randolph H. Levine, Fred N. Ris and Alvin Nelson, George Washington High School.



Denver area high school students gave computer professionals a show Wednesday at the Assn. of Computer Machinery convention under way this week at the Denver Hilton. Students engaged in working a problem given them by one of the professionals on a Control Data Computer are, from left, Alvin Nelson and Robert Kahn of George Washington High School; Larry Davis of Golden High School, and Randy Lewis, also of George Washington.

—Rocky Mountain News Photo by Bob Talkin.

Students Display Computer Prowess

Four students from high schools in the Denver area, described by their instructors as "gifted and ambitious," are demonstrating their computer prowess at the annual conference of the Assn. for Computing Machinery being held this week in Denver.

The computer programs in the demonstration have been created entirely by the students. The four were employed at the Denver office of Control Data Inc. this summer to develop the demonstration.

The four students' abilities are the result of a program which started with 35 students from Denver's George Washington High School in the summer of 1962.

Since that time the Control Data education program has ex-

panded until 150 students from high schools in Denver and Jefferson County are participating.

Plans for the 1963-64 program are more extensive.

R. L. Albrecht, a senior applications analyst for Control Data in Denver, conceived the program and has directed it.

According to Albrecht, it originated after a chance meeting with Irwin Hoffman, a Denver high school mathematics teacher. Albrecht and Hoffman developed the initial program.

In the program as designed by the two, the goal is to "teach mathematics, not computers."

Much of the work in the program has been done as extra-curricular activity on the students' own time before and after classes.

Albrecht said the students quickly learned fundamentals of mathematical analysis after basic demonstrations and lectures. Students developed problem solving procedures, programmed solutions in the FORTRAN computer language and ran their own problems on Control Data's 160A computer. Computer time is provided without cost to the students.

Special work books for the program have been developed. Mathematical problems solved in the program are extremely sophisticated. Two of the students won top prizes in the Denver area Science Fair.

Students have been eager to demonstrate their knowledge, Albrecht said. Many will serve as teachers in this coming year's program.

Five Area Students Honored

Special to The Rocky Mountain News

SANTA BARBARA, Calif., April 22—Five Denver area high school students received top awards at the Assn. for Educational Data Systems convention here Wednesday.

The five students, associated with the University of Colorado, College of Engineering Computer Science Center in Denver, comprised the largest group from any single area to win awards.

The contest for secondary school students was for the most original computer program. Denver students won two second prizes, two third prizes and an honorable mention.

Winners include Larry Davis of Golden, second prize; Fred Ris of 835 Eudora st., second prize; Richard Mallory of 11350 W. 25th pl., Lakewood, third; Randy Levine of 43 S. Hudson st., third, and Robert Kahn of 857 Grape st., honorable mention.

Davis, Ris, Levine and Kahn are lab assistants in the secondary computer science program at the CU Denver Center. Mallory developed his program on weekends at the center.

The center is operated by the CU College of Engineering with the co-operation of Control Data Corp. and the Denver Chamber of Commerce.

The University provides administrative and clerical facilities, teaching supervision, a classroom and computer space. Control Data Corp. has made available a Control Data 160 computer, peripheral equipment and the services of Robert Albrecht, educational specialist.

Supplies and supporting equipment have been provided by local business concerns through the Chamber.

Starting in September 1963, 144 high school students and 26 high school teachers from metropolitan area high schools have enrolled in the computer science program at the center.

