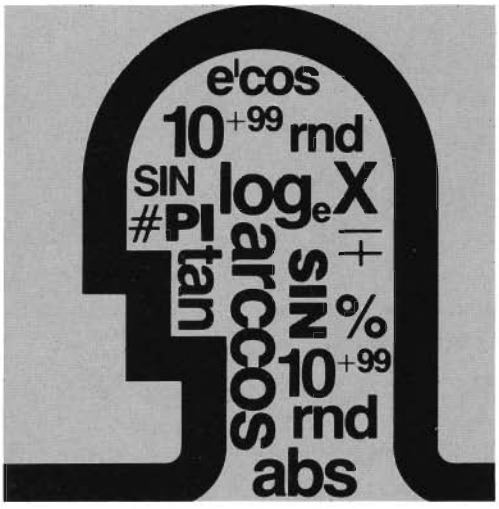
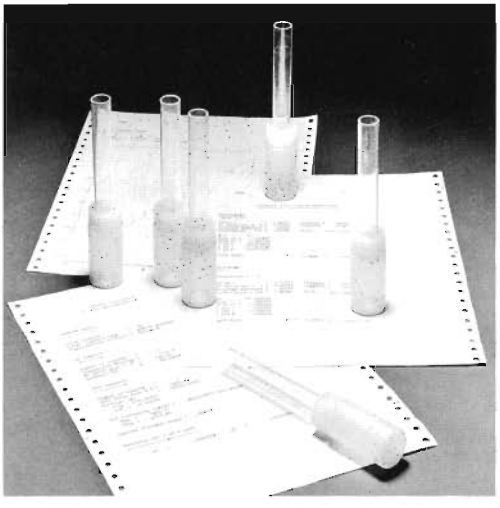
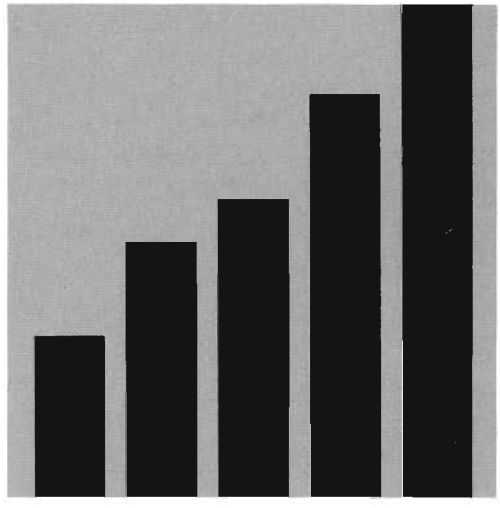
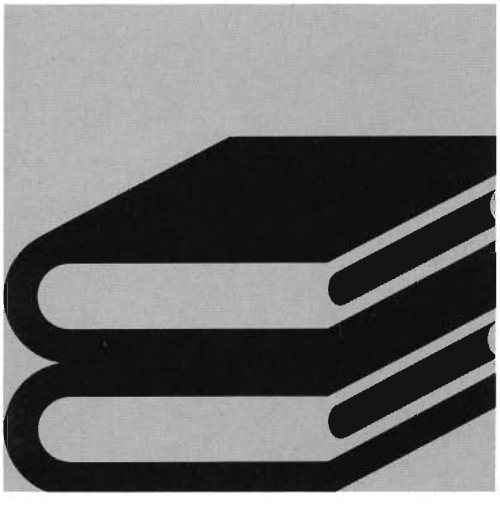
A new Approach in Computing

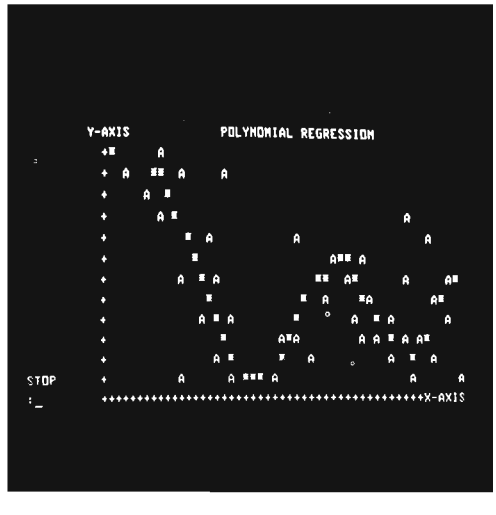
Wang Computing Systems

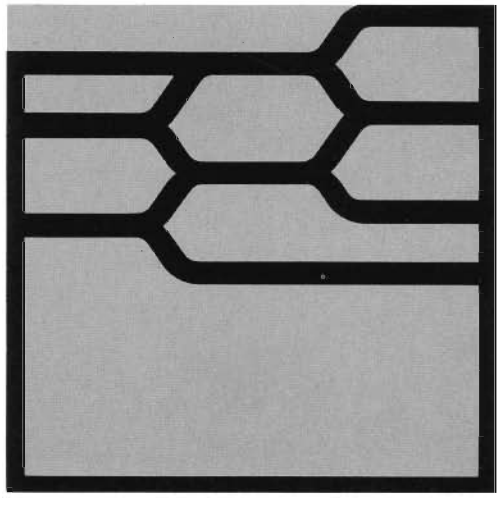






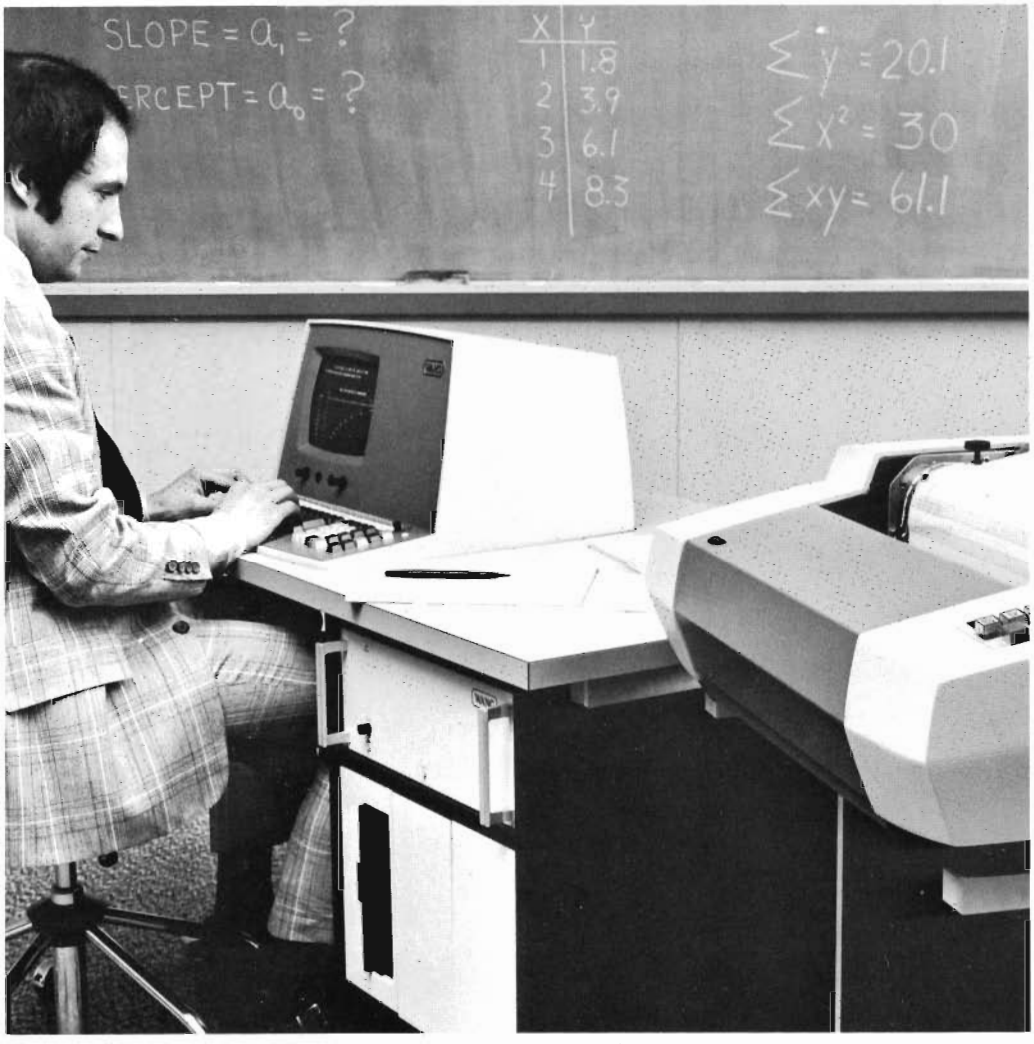






Hands-on Computing in BASIC

Wang Computing Systems



50,000 Wang systems installed in applications such as yours give us the experience and knowhow to build just what you want: a system, powerful enough to handle your every problem, simple enough to operate easily, and flexible enough to adapt to your needs. At a price that is dwarfed by the system's performance.

Powerful, simple, flexible, inexpensive, a Wang Computing System...

. . . frees you from those many hours a day on-line, from the restrictions of slow terminals, oversubscribed computer centers, and operating procedures unresponsive to your needs.

. . . solves your problem the way you want. You can reprocess your data, restate your problem, evaluate your intermediate results, and decide as you analyze — at no extra cost.

. . . plugs in and turns on to give you what you need first and foremost: immediate answers and complete solutions.

. . . is paid for in two years with your monthly time-sharing bills.

Powerful enough to handle your every problem.

The hardwired BASIC interpreter contains a complete set of instructions that gives you the tools to manipulate your problem the way you want.

☐ 286 variable names each for numeric variables, numeric array variables, string variables and string array variables to handle your problems.

☐ One or two-dimensional numeric and alphanumeric string arrays provide a simple system to handle your data.

☐ Multi-argument lines and multi-argument, multi-line subroutines provide economy in programming.

☐ 14 powerful matrix statements speed up and simplify your matrix operations.

☐ The minimum system with 4K bytes of user memory, excluding the matrix statements, will handle the inversion of a 16x16 matrix. If the matrix statements are included in the interpreter, the inversion of a 20x20 matrix is possible.

☐ The maximum system with 32K bytes of user memory, excluding the matrix statements, will handle the inversion of a 61x61 matrix. If the matrix statements are included in the interpreter, the inversion of a 63x63 matrix is possible.

☐ Assembler-like statements such as AND, OR, XOR and ROTATE for bit and byte manipulations give you greater capacity to store yes/no-type test responses.

☐ The PRINTUSING statement prints data in any specified format giving you complete flexibility in the formatting of your output.

Powerful Simple Economical

Wang Computing Systems

Simple enough to operate easily.

Wang computing systems use BASIC, the easiest and probably most popular programming language in use today. You can converse with the system through the touch of a key and a glance at the silent screen.

For the ultimate in ease of programming, you can

☐ input BASIC verbs with a single keystroke each.

☐ renumber a program automatically in increments you determine.

☐ alter, insert and delete individual characters anywhere in a line, before or after entry into memory, without having to rekey the entire line.

☐ A coded error pointer which pinpoints and identifies syntax errors saves you time and frustration when debugging your program.

☐ The feature TRACE steps through the program and produces a printout whenever a variable receives a new value or a program transfer is made.

For the ultimate in fast results to calculator-type problems, try this example:

$$\left[\frac{\sin^{-1}(\sin(5x6))}{\ln(\exp(3))}\right]^{2}$$

Enter this multi-argument line:

:PRINT (ARCSIN(SIN(5x6))/LOG(EXP(3)))↑2

When you touch the EXECUTE key, the result, 100, (note the system's high accuracy) will display instantly on the screen.

There is no need to worry about format statements to assure accuracy. The system shifts automatically in and out of floating point arithmetic as needed, providing 13-digit accuracy throughout its 10^{-99} to 10^{+99} range.

16 special function keys give you instant access to 32 programs or subroutines in memory. Or they can be used to simplify the operator's task.

Flexible enough to adapt to your needs.

Wang computing systems adapt to your problems and grow with them.

The CPU can be expanded from 4K bytes to 32K bytes of user memory, and you can choose from a full range of peripherals.

☐ Inexpensive storage on tape cassettes and 9-track tape units, or

☐ On-line storage for fast retrieval on 1/4 to 10-megabyte disks.

☐ Medium and high-speed printers for your hard-copy output.

☐ Graphic output is easily handled on digital and analog plotters.

☐ Paper tape and batch card readers and a digitizer facilitate automated data input.

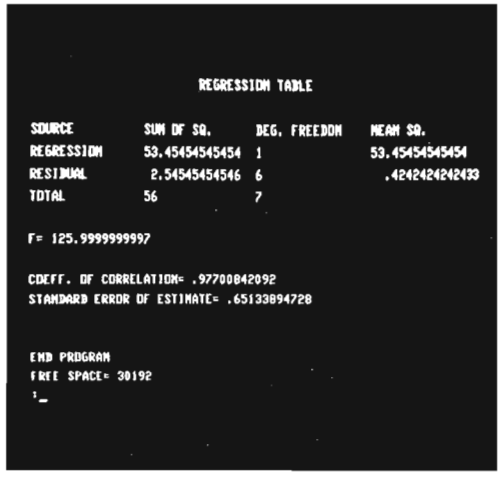
☐ A whole range of I/O interfaces handles on-line data acquisition and reduction.

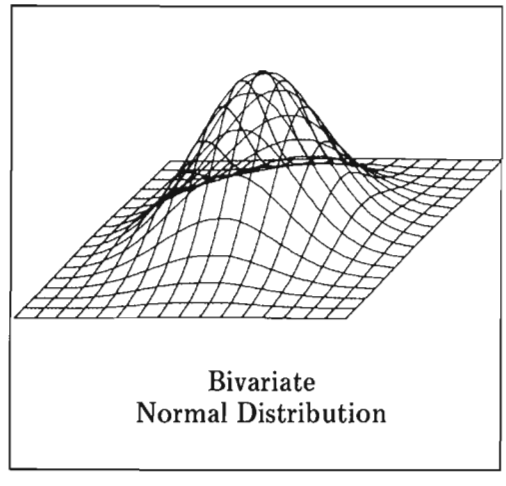
☐ A telecommunications interface transforms your Wang computing system into the intelligent terminal that you might use to preprocess your data conveniently and inexpensively.

At a price that is dwarfed by the system's performance.

A completely operational system, with BASIC interpreter, CRT, 4K bytes of user memory, keyboard and tape cassette unit is only a few dollars a day under a five-year lease plan.

Put a Wang computing system where the action is — at your fingertips. Now you can afford it.





Bivariate
Normal Distribution

Instant Software for Instant Solutions

Wang Computing Systems

The use of statistical and mathematical procedures as a tool for the analysis and extension of research findings is now universal in such diverse fields as agriculture, biology, chemistry, medicine, physics, the behavioral sciences, economics, industry and business.

Wang computing systems provide the tool to collect, organize, summarize and analyze your raw data and extract the meaningful information you are searching for.

For many years, Wang calculating and computing systems have provided solutions for users with statistical and mathematical problems.

Our software library contains a vast collection of relevant programs, created by experienced mathematicians and statisticians. In addition, highly sophisticated contributions have been made by users of Wang systems.

The following listing gives you an excerpt of programs available.

STATISTICS

Anova: 1-way, 2-way, 3-way Anova. Latin Squares. 2-factor, 3-factor Anova with or without repeated measures . . .

Regression: Least square fit — linear, geometric and exponential.
Curve fitting — sum of two or three exponentials.
Polynomial — multiple.
Stepwise regression analysis . . .

Sequential: The package includes the most frequently used sequential probability ratio tests for testing a simple hypothesis H0 against a simple alternative H1.

Options are available for tabular and graphical display of acceptance and rejection numbers, as are plots of the operating characteristics curve and average sample number curve.

Nonparametric: Binomial test. Kolmogorov-Smirnov 1-sample and 2-sample test. Wilcoxon matched-pairs signed-ranks test. Walsh test. Mann-Whitney U test. Wald-Wolfwitz runs test. Cochran Q test. Friedman 2-way Anova by ranks. Kruskal-Wallis 1-way Anova by ranks. Contingency coefficient. Kendall rank (and partial rank) correlation coefficient, and coefficient of concordance . . .

MATHEMATICS

Roots of equations
Numerical methods
Matrix manipulation
Complex numbers
Fourier analysis
Linear programming.

ROUTINES TO SUPPORT YOUR PROGRAMS

Plot, Multi-Plot, Polar-Plot, T-Plot, Histogram.
Sort, Pack and Unpack.
Compression program, decompression and cross reference program.
Listing program.
Disk and tape dump.
Disk sort program.
Tape sort program.
Tape/disk/display utilities.
Scratch volume initialization and date routines.
Disk utility Keyed File Access Method (KFAM).

Over 100 Sales and Service Offices nationwide.

WANG

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