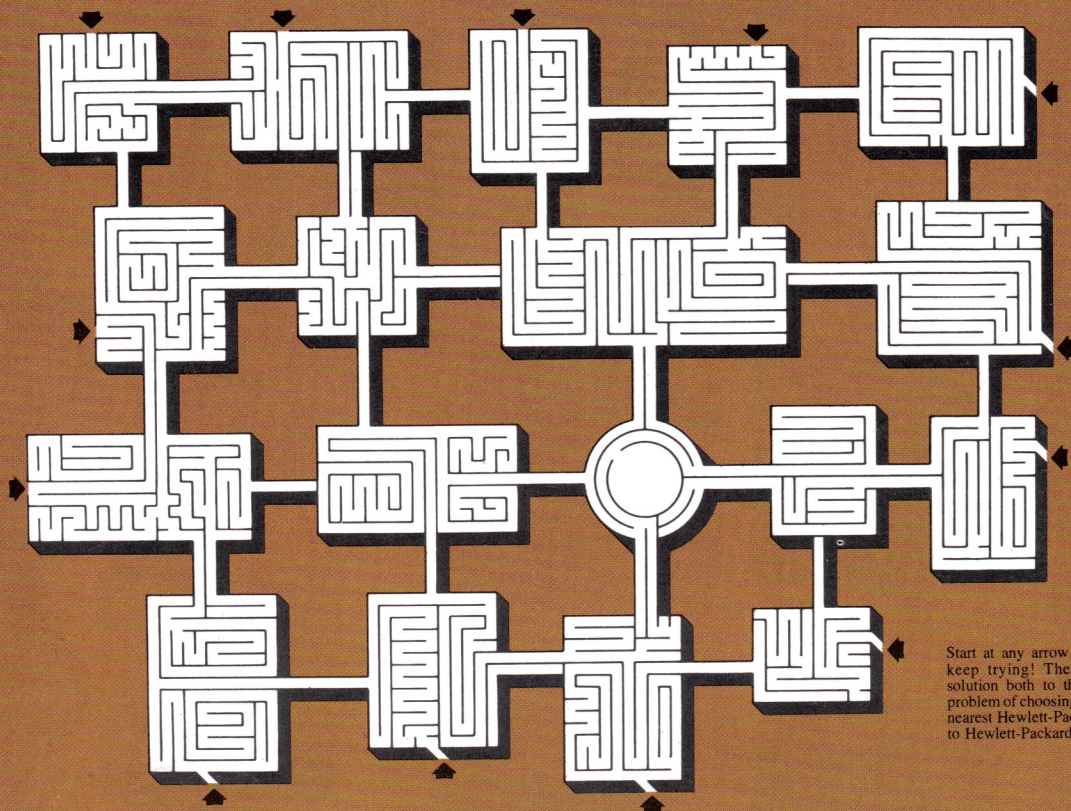


WAY THROUGH THE ADVANCED PERSONAL

FINDING YOUR

CALCULATOR MAZE



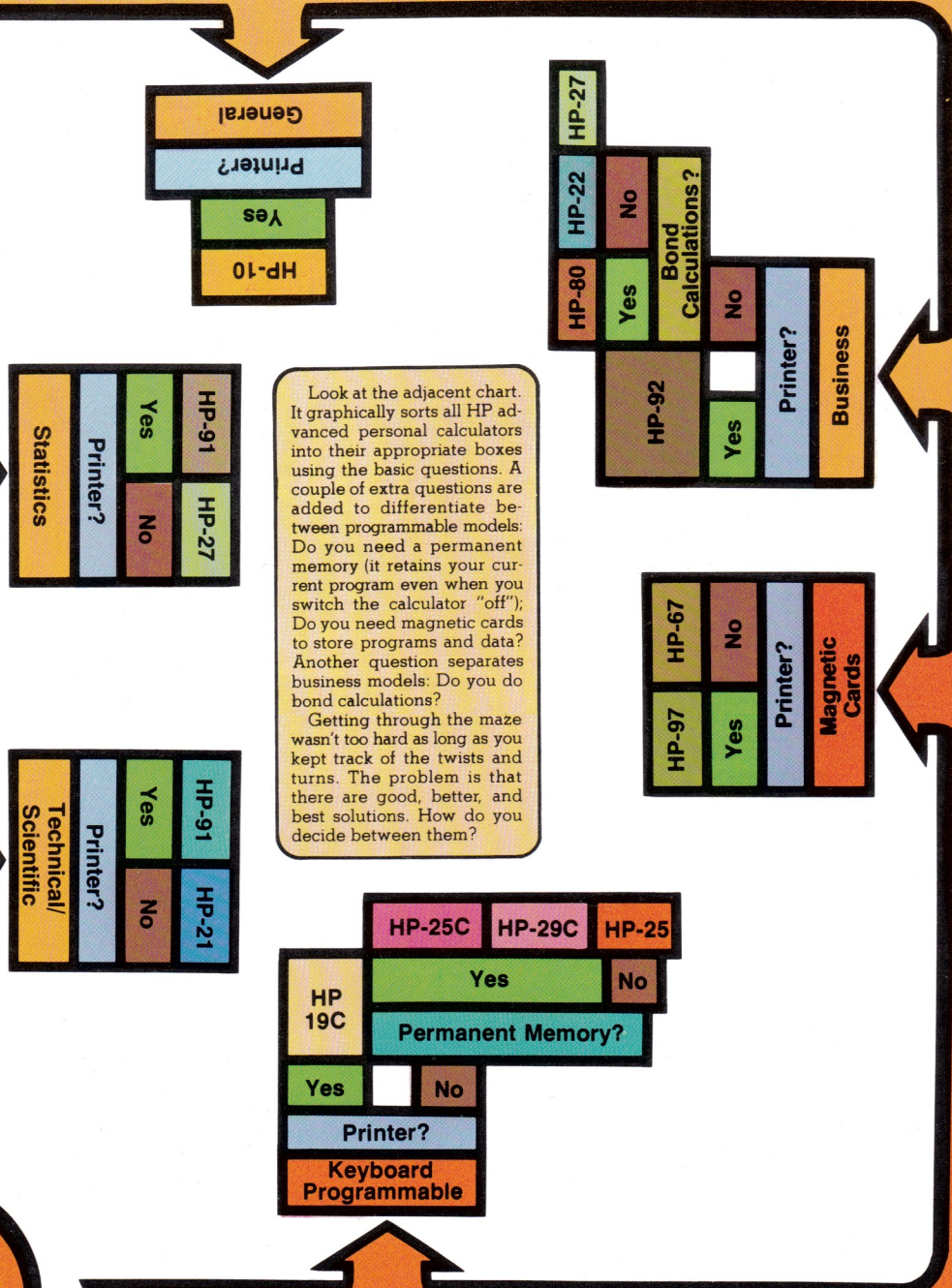
Start at any arrow, aim for the circle. Keep trying! Then for the simplest solution both to the maze and to the problem of choosing a calculator, see the nearest Hewlett-Packard dealer or write to Hewlett-Packard.

HEWLETT  PACKARD

PREPROGRAMMED

START

PROGRAMMABLE



Look at the adjacent chart. It graphically sorts all HP advanced personal calculators into their appropriate boxes using the basic questions. A couple of extra questions are added to differentiate between programmable models: Do you need a permanent memory (it retains your current program even when you switch the calculator "off"); Do you need magnetic cards to store programs and data? Another question separates business models: Do you do bond calculations? Do you do bond calculations?

Getting through the maze wasn't too hard as long as you kept track of the twists and turns. The problem is that there are good, better, and best solutions. How do you decide between them?

	HP-25C	HP-29C	HP-25
	Yes		No
HP 19C	Permanent Memory?		
Yes		No	
	Printer?		
	Keyboard Programmable		

HP-80	HP-22	HP-27
Yes	No	
Bond Calculations?		
	No	
HP-92		
Yes		
	Printer?	
	Business	

HP-97	HP-67
Yes	No
Printer?	
Magnetic Cards	

HP-91	HP-27
Yes	No
Printer?	
Statistics	

HP-91	HP-21
Yes	No
Printer?	
Technical/Scientific	

HP-10	
Yes	
Printer?	
General	

Getting On The Right Path

Where do you start? You are surrounded by a jumble of choices. A confusion of features, claims, models, manufacturers...How do you sort them out? How do you avoid dead ends so you end up with the best calculator to meet your needs?

First, narrow your choices and be sure that you are comparing apples and apples.

Ask a few simple questions. Can I solve my problems with the functions preprogrammed into the calculator? Do I often solve the same problem over and over again? What type of calculations do I (or will I) typically perform? Do I need a printed record of my calculations?

If your answer is NO to the first question or YES to the second; then, you should begin on the programmable path. Otherwise, start on the preprogrammed one (if in doubt, start here first); then choose the branch that relates closest to the work you now do or will be doing in the near future.

See where it leads you. Although greatly simplified, these questions can give you a rough idea of the type of advanced personal calculator that might meet your needs.

Keeping Score

Finding the best value. What is value? How do you determine it? You can buy solely on the basis of price, but that does not guarantee the best value.

Here is a list of factors or features that contribute to value. (You will probably want to add some items of your own.)

Any Calculator

- **Manufacturer's Reputation**
- **Quality of Construction**
- **Proven Reliability**
- **Satisfied Users**

} Probably best checked with friends and associates.

- **Portability**—Must be able to operate from batteries as the term portable is used here.
- **Repairability**—Not a factor if you are buying a “throw-away” calculator.
- **Quick service available**—repairability doesn't matter if you can't get it fixed when you need it.
- **Choice of accessories**—Would you like to have: carrying case, display stand, spare batteries, or...?
- **Comprehensive owner's manual**—How much info is available when you need it?
- **Most common functions I use**—Makes the job of solving your problem easier.
- **Extended functions I use**—Can the calculator grow with me?
- **Number of data registers**—Avoids requiring the use of pencil and paper for immediate answers, constants, etc.
- **Ease of use**—Related to several of the preceding plus the “language” of the calculator.
- **Low battery indication**—Nice to know before it goes dead.

Programmable Calculator

- **Storage medium**—Do you need to permanently record programs?
- **Available programs**—What's available if you want ready-to-use applications programs.
- **Program capacity**—Determines how long a program you can write (affected by the following).
- **User-definable keys**—If you can define your own keys, the programming job is easier.
- **Merged key codes**—Lets you do with one instruction what would normally require two or three steps.
- **Branching**—Gives you more flexibility so you can jump around between program elements rather than writing the program from beginning to end.

Check on your choices. Now you can compare the models you are considering against the factors and features you want. Three examples are included: one scientific; one financial/business, and one programmable. Simply put a check for each factor offered by each model.

Then either scan the list, count the number of checks, or...

Fill out your scorecard. Here's a "game" in which you get to determine what the score will be. What determines the score is how important various factors are to you. There is room on the three examples for you to insert a weight for each factor and thus for each model that offers this factor. For example:

- 0 – Optional
- 1 – Desirable
- 2 – Very Desirable
- 3 – Required

Using this technique you can determine the relative score for each model. A further refinement would be to eliminate any contender that did not offer each and every factor that you scored as "required."

Checking Your Solution

You can see that there are several ways through the personal calculator maze. We have discussed two – either or both may be of use to you in finding your best solution.

(By the way, the maze on the front cover is real. The author created it especially for Hewlett-Packard. Try solving it. If you would like to check your best solution against the author's, see your HP dealer or write us for a copy.)

Finding the type of calculator you want is fairly easy. Eliminating the models that do not meet your minimum requirements is relatively simple. Determining total value is the hard part. Consider the following "formula."

$$\text{Value} = \frac{\text{Capability} \times \text{Quality} \times \text{Usability}}{\text{Cost}}$$

Quality relates to manufacturer's reputation, quality of construction, proven reliability, satisfied users – those factors "best checked with friends and associates." Capability comprises those features that relate to solving your problem. Usability is the end result of all those factors that save you time and effort. We're not sure how you can apply numbers to the equation, but we're confident of the result.

If you **Buy value**
you'll **Buy Hewlett-Packard**

Programmable Example

Factors	Wt.	HP 19C	HP 25 HP 25C	HP 29C	HP 67	HP 97
Battery Portable						
Quick Service						
Comprehensive Owner's Manual						
Carrying Case						
Low Battery Indication						
≥ 8 Addressable Data Registers						
> 75 Program Steps						
Back Step/Single Step Review						
Direct Branching						
Pause						
Insert/Delete						
Indirect Addressing						
User-Definable Keys						
Printed Record						
Indirect Branching						
Merged Key Codes						
Separate Storage Media						
Non-Volatile Storage						
Score						

The shaded areas show which models have each factor. You can write over these areas either to add a check or put in your weighted number. The score then is the total of the checks or the sum of the weighted number.

Scientific Example

Financial /Business Example

Factors	Wt.	HP 21	HP 27	HP 91	HP 25 HP 25C	HP 29C	HP 19C
Battery Portable							
Quick Service							
Comprehensive Owner's Manual							
Math Functions							
Trig							
Degrees and Radians							
Grads							
Percent							
Statistical Functions							
Mean and Standard Deviation							
Linear Regression							
Factorial							
Correlation Coefficient							
Variance							
Normal Distribution							
Low Battery Indication							
More than Ten Registers							
Extended Math Functions							
Absolute Value							
Integer/Fraction Truncation							
Non-Volatile Storage							
Printed Record							
Score							

Factors	Wt.	HP 10	HP 22	HP 27	HP 80	HP 92
Battery Portable						
Quick Service						
Comprehensive Owner's Manual						
Carrying Case						
Printed Record						
More than Ten Registers						
Arithmetic Functions						
Add, Subtract, Multiply, Divide, Percent						
Percent Change						
Financial Functions						
Five Variables n, i, PMT, PV, FV						
Four Variables n, i, PMT, PV, FV						
Simple Interest						
Amortization						
Internal Rate of Return (IRR)						
Net Present Value (DCF)						
Bonds, Prices and Yields						
Depreciation Schedules						
Calendar						
Statistical Functions						
Mean and Standard Deviation						
Linear Regression (Two Variables)						
Correlation Coefficient						
Normal Distribution						
Score						

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