ent. A math coprocessor is brought into play only when the spreadsheet uses exponentiation, logarithms and the like.

Of course, looking at the various 80287 and 80387 coprocessor alternatives, one has to wonder about how "Intel-compatible" the non-Intel chips are. Aware of this, both IIT and Cyrix have published compatibility reports that show floating-point calculation results that are consistent with Intel's to all but the very least-significant bits—a resolution detail rarely, if ever, used in any application. Cyrix has even gone a step further to show that calculations from its math chips are actually more accurate than those from Intel.

Of course, no comparison is complete without a look at prices. Table 2 gives the list prices for all currently-available math coprocessors. In the 80287 arena, AMD's 80C287-10, at $99, has a price that can't be beat. IIT is also pricing its processors substantially lower than the Intel baseline. Among 80387 processors, IIT again lags Intel substantially, while Cyrix chooses to match Intel's prices.

Don't be misled by the prices listed in Table 2. Use these as guidelines only. As with everything else in the microcomputer world, "street" prices are substantially less than manufacturer list prices. Shop around

for the best price. As an example, I've seen mail-order prices for an 80387XL ($370 list) for $173; an 80387SX-16 ($506 list) for $268; an 80387DX-33 ($799 to $999 list) for $450 to $579; a 2C87-10 ($278 list) for $176; and so on.

Installing Your Own Math Coprocessor

When selecting a math coprocessor to install in your own system, you must determine which manufacturer you want to go with and what speed version you need. If you have a PC or XT system, your choice is limited to Intel's 8087, and you have only to determine the correct speed version.

ferently (I'm sure it's intuitive if you don't think about it):

    8087   = 5 MHz
    8087-2 = 8 MHz
    8087-1 = 10 MHz

For 286 systems operating at or below 10 MHz, get a math coprocessor that matches the speed of your CPU, unless otherwise indicated in your system's manual. If you have a 286 system that operates faster than 10 MHz, your system will probably want a 10-MHz coprocessor. Check your system's manual, though, to see if a faster coprocessor (like IIT's 20-MHz 2C87) can be used. Incidentally Intel's 80287XL is a "one speed fits

"Street prices are substantially lower than manufacturer list prices."

For all except 286 systems, you need to get a coprocessor with the same speed as your CPU. For example, if you have a 25-MHz 386DX system, you need a 25-MHz math coprocessor. Similarly, if you own an 8-MHz XT, you must get an 8-MHz 8087. All math coprocessors except the 8087 have a dash and suffix that indicate speed (e.g., 80287-10 is a 10-MHz part). The 8087 is identified dif-

all" device. It operates at up to 12.5 MHz and can be used anywhere a standard 80287 can be used, except in 80386DX systems that have an 80287 math-coprocessor socket (where you are required to use an original 80287 coprocessor).

If you're going to install an 8087 in an original IBM PC, be wary of your power supply. Early PCs had low-capacity power supplies, and addition-

Mfr.	Device	CPU	5 MHz (-6)	6 MHz (-6)	8 MHz (-8)	10 MHz (-10)	12.5 MHz (-12)	16 MHz (-16)	20 MHz (-20)	25 MHz (-25)	33 MHz (-33)
Intel	8087	8088/6	$142								
	8087-2	8088/6			$205						
	8087-1	8088/6				$270					
Intel	80287	80286	$212	$326	$374						
	80287XL	80286					$370				
	80287XLT	80286					$370				
AMD	80C287	80286				$99					
	80EC287	80286				$109					
IIT	802C87	80286			$239	$278	$298		$338		
Intel	80387SX	80386SX						$506	$550		
Cyrix	83S87	80386SX						$506	$550		
Intel	80387DX	80386DX						$570	$647	$814	$994
IIT	803C87	80386DX						$439	$499	$639	$779
Cyrix	83D87	80386DX						$570	$647	$814	$994
	EMC87	80386DX							$774	$865	$994
Weitek	WTL3167	80386DX							$495	$795	$995
Weitek	WTL4167	80486								$995	$1,295

Table 2. Manufacturer List Prices * for PC Math Coprocessors

*As of January 1991