



## HP 9000 BENCHMARK SUMMARY

	HP 9000	HP 1000F	9845 #200	9836
Processor	NMOS III	TTL STTL	Bit-Slice	NMOS 68000
Clock Rate	18 MHz		5.7 MHz	8 MHz
Word Length	32	16	16	16
Max. Phys Mem	2.5 Mbytes	2.0 Mbytes	1.5 Mbytes	1.8 Mbytes
<b>MACHINES INSTRUCTION TIMES</b>				
LDA	.55 uSec	1 uSec	3.3 uSec	1.25 uSec
Base Set Inst/Sec	2,000,000	1,000,000		
IBM MIPS	.7	.5		.4-.5
MFLOPS (32-bit)	225,000	200,000		
MFLOPS (64-bit)	125,000	100,000	5,500	10,000
<b>Floating Point</b>				
32-bit +	4.66	5		
32-bit *	5.11	6		
32-bit /	6.44			
64-bit +	6.00	10	40	137
64-bit *	10.40	13	140	302
64-bit /	15.95			
<b>COMPUTATION</b>				
Language	BASIC cmplr	FORTRAN cmplr	BASIC intpr	BAISC intpr
<b>Real</b>				
Kb1 (for/next)	.014	.00	.09	.17
Kb2 (if/then)	.020	.04	.25	.60
Kb3 (+-*/)	.057	.10	.73	1.41
Kb5 (gosub)	.080	.15	.99	1.75
Kb7 (array)	.214	.25	2.63	4.31
average ratio	10.4	6.0	1.00	0.52
<b>Integer</b>				
Kb1 (for/next)	.0051	.00	.05	.09
Kb2 (if/then)	.0062	.01	.29	.39
Kb3 (+-*/)	.019	.04	1.11	.82
Kb5 (gosub)	.030	.05	1.31	.90
Kb7 (array)	.11	.15	2.67	2.60
average ratio	30	16	1.00	.80
Whetstone B/D (op/sec)	152,000	244,000	5,400	11,300
Twr	554 sec		5354 sec	16356 sec
<b>I/O BENCHMARKS</b>				
Max Trans Rate (Mbytes/sec)	1	2.3	.33	2.4
DMA Channels	24	2	1	2
1 Output Real	3.57 ms	6.00 ms	17.89 ms	2.25 ms
2 Enter Real	4.90 ms	10.49 ms	12.30 ms	2.11 ms
3a Enter 1K w/check	130 ms	17.2 ms	42 ms	39 ms
3b Enter 1K wo/check	6.94 ms	17.26 ms	40.95 ms	6.23 ms
4 Output 1K string	7.25 ms	10.30 ms	44.59 ms	16.39 ms
Overlap Transfer	4.31		6.23 ms	
<b>GRAPHICS</b>				
DRAW 1cm vector	3100 v/s	538 v/s (AGP)	300 v/s	300 v/s
APLOT 1 cm vector	11000 v/s	1739 v/s (DGL)		