



# CFP2000 Result

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IBM Corporation  
RS/6000 44P-270 (4 CPU)

SPECfp\_rate2000 = 11.8

SPECfp\_rate\_base2000 = 10.5

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Jan-2000 | Hardware Avail: Feb-2000 | Software Avail: Feb-2000

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	560	13.3	4	379	19.6
171.swim	4	2171	6.63	4	1623	8.86
172.mgrid	4	998	8.37	4	1031	8.10
173.applu	4	1270	7.68	4	1269	7.68
177.mesa	4	517	12.6	4	520	12.5
178.galgel	4	835	16.1	4	820	16.4
179.art	4	447	27.0	4	454	26.6
183.quake	4	639	9.44	4	458	13.2
187.facerec	4	963	9.16	4	645	13.7
188.amp	4	870	11.7	4	737	13.8
189.lucas	4	1163	7.98	4	1162	7.99
191.fma3d	4	1003	9.71	4	989	9.85
200.sixtrack	4	738	6.91	4	739	6.91
301.apsi	4	997	12.1	4	939	12.8

**Hardware**

CPU: Power3-II  
CPU MHz: 375  
FPU: Integrated  
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip  
CPU(s) orderable: 1,2,3,4  
Parallel: None  
Primary Cache: 32KBI+64KBD (on chip)  
Secondary Cache: 4MB unified (off chip)  
L3 Cache: None  
Other Cache: None  
Memory: 4GB  
Disk Subsystem: 2x9.1GB IBM Fast/Wide SCSI 7200 RPM  
Other Hardware: None

**Software**

Operating System: AIX 4.3.3  
Compiler: Fortran 77 and 90: IBM XL Fortran 6.1 invoked as 'xlF90'  
C: IBM VAC 5.0 invoked as 'xlc'  
File System: AIX/JFS  
System State: Multi-user

## Notes/Tuning Information

### Portability Flags

-qfixed used in: wupwise, swim, mgrid, applu, galgel, sixtrack, apsi  
-qsuffix=f=f90 used in: galgel, facerec, lucas, fma3d

NOTE: The flag combination "qpdf1/qpdf2" indicates a 2 step compilation process  
the exact process is as follows:

```
fdo_pre0 = rm -rf ${PDFDIR}; mkdir -p ${PDFDIR}
```

```
PASS1_FLAGS --qpdf1 <optimization flags>
```

```
PASS1_LD_FLAGS =<optimized libraries> -L<pdf library location> -lpdf
```

```
PASS2_FLAGS --qpdf2 <optimization flags>
```

```
PASS2_LD_FLAGS --<optimized libraries>
```

### Base Flags:

```
Fortran: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
```

```
C: -O5 -lmass
```

### Peak Flags:

```
168.wupwise: -qpdf1/pdf2 -O4 -qipa=level=2 -lmass
```

```
171.swim: -qpdf1/pdf2 -O4 -qipa=level=2 -qhot -lmass
```

```
172.mgrid: -O3 -qarch=pwr3 -qhot
```



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## Notes/Tuning Information (Continued)

```
173.applu: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
177.mesa: -O5 -lmass
178.galgel: -O4 -qipa=level=2 -qhot -lmass
179.art: -O5 -lmass
183.quake: -O5 -lmass -lhm
187.facerec: -O3 -qarch=pwr3 -qhot -lmass
188.amp: -O3 -qarch=pwr3 -bnso -bI:/lib/syscalls.exp
189.lucas: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
191.fma3d: -O4 -qipa=level=2 -qhot -lmass
200.sixtrack: -O3 -qarch=pwr3
301.apsi: -O4 -qipa=level=2 -qhot -lmass -bnso -bI:/lib/syscalls.exp
```