



# CFP2000 Result

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IBM Corporation  
RS/6000 Model 7026-M80 (8 CPU)

SPECfp\_rate2000 = 21.1  
SPECfp\_rate\_base2000 = 20.6

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Apr-2000 | Hardware Avail: Jun-2000 | Software Avail: May-2000

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	461	32.2	8	441	33.7
171.swim	8	1501	19.2	8	1489	19.3
172.mgrid	8	1128	14.8	8	1084	15.4
173.applu	8	1215	16.0	8	1163	16.8
177.mesa	8	734	17.7	8	730	17.8
178.galgel	8	694	38.8	8	701	38.4
179.art	8	586	41.2	8	586	41.2
183.quake	8	680	17.7	8	655	18.4
187.facerec	8	707	24.9	8	707	24.9
188.amp	8	1008	20.2	8	909	22.4
189.lucas	8	1013	18.3	8	987	18.8
191.fma3d	8	1111	17.5	8	1056	18.5
200.sixtrack	8	1153	8.86	8	1153	8.86
301.apsi	8	1018	23.7	8	1018	23.7

**Hardware**

CPU: IBM PowerPC RS64-III  
CPU MHz: 500  
FPU: Integrated  
CPU(s) enabled: 8 cores, 8 chips, 1 core/chip  
CPU(s) orderable: 2,4,6,8  
Parallel: No  
Primary Cache: 128KBI+128KBD (on chip)  
Secondary Cache: 4MB (I+D) (off chip, per CPU)  
L3 Cache: None  
Other Cache: None  
Memory: 4GB  
Disk Subsystem: 2x9.1GB Ultra SCSI, 7200 RPM  
Other Hardware: None

**Software**

Operating System: AIX 4.3.3 plus APAR IY09807  
Compiler: Fortran 77 and 90: IBM XL Fortran 7.1 invoked as 'xlf90'  
C: IBM VAC 5.0.1 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 = {libraries} -L{pdf library location} -lpdf
PASS2_FLAGS    =-qpdf2 {optimization flags}
PASS2_LD_FLAGS =- {libraries}
```

### Base Flags:

Fortran: -O5 -lmass  
C: -O5 -lmass

### Peak Flags:

168.wupwise: -qpdf1/pdf2 -O4 -qipa=level=2 -lmass, fdpr -v -R3  
171.swim: -qpdf1/pdf2 -O4 -qipa=level=2 -lmass -qhot, fdpr -v -R3  
172.mgrid: -O4 -qarch=pwr3



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## Notes/Tuning Information (Continued)

```
173.applu: -O3
177.mesa: -O3 -qarch=ppc,fdpr -v -R3
178.galgel: -O4 -qipa=level=2 -qhot -lmass, fdpr -v -R3
179.art: -O5 -lmass
183.quake: -O5 -lmass -lhm
187.facerec: -O5 -lmass
188.amp: -O3 -lmass
189.lucas: -qpdf1/pdf2 -O3 -qarch=rs64b -lmass,fdpr -v -R3
191.fma3d: -O3 -lmass
200.sixtrack: -O5 -lmass
301.apsi: -O5 -lmass
```