

Operand stack manipulation operators

any **pop** -
any₁ any₂ **exch** any₂ any₁
any **dup** any any
any₁ .. any_n **n** **copy** any₁ .. any_n any₁ .. any_n
any_n .. any₀ **n** **index** any_n .. any₀ any_n
any_{n-1} .. any₀ **n** **j** **roll** any_{(j-1) mod n} .. any₀ any_{n-1} .. any_{j mod n}
any₁ .. any_n **clear** #
any₁ .. any_n **count** # any₁ .. any_n **n**
- **mark** mark
mark any₁ .. any_n **cleartomark** -
mark obj₁ .. obj_n **counttomark** mark obj₁ .. obj_n **n**

Arithmetic and math operators

num₁ num₂ **add** num₃
num₁ num₂ **div** num₃
int₁ int₂ **idiv** int₃
int₁ int₂ **mod** remainder
num₁ num₂ **mul** num₃
num₁ num₂ **sub** num₃
num₁ **abs** num₂
num₁ **neg** num₂
num₁ **ceiling** num₂
num₁ **floor** num₂
num₁ **round** num₂
num₁ **truncate** num₂
num₁ **sqrt** num₂
num den **atan** angle
angle **cos** real
angle **sin** real
base exponent **exp** real
num **ln** real
num **log** real
- **rand** int
int **srand** -
- **rrand** int

Array operators

int **array** array
- **[** mark
mark obj₀ .. obj_{n-1} **]** array
array **length** int
array index **get** any
array index any **put** -
array index count **getinterval** subarray
array₁ index array₂ **putinterval** -
array **aload** array₀ .. array_{n-1} array
any₀ .. any_{n-1} array **astore** array
array₁ array₂ **copy** subarray₂
array proc **forall** -

Dictionary operators

int **dict** dict
dict **length** int
dict **maxlength** int
dict **begin** -
- **end** -
key value **def** -
key **load** value
key value **store** -
dict key **get** any
dict key any **put** -
dict key **known** bool
key **where** *If found: dict true*
If not found: false
dict₁ dict₂ **copy** dict₂
dict proc **forall** -
- **errordict** dict
- **systemdict** dict
- **userdict** dict
- **currentdict** dict
- **countdictstack** int
array **dictstack** subarray

String operators

int **string** string
string **length** int
string index **get** int
string index int **put** -
string index count **getinterval** substring
string₁ index string₂ **putinterval** -
string₁ string₂ **copy** substring₂
string proc **forall** -
string seek **anchorsearch** *If found: post match true*
If not found: string false
string seek **search** *If found: post match pre true*
If not found: string false
string **token** *If found: post any true*
If not found: false

Relational, boolean, and bitwise operators

any₁ any₂ **eq** bool
any₁ any₂ **ne** bool
num₁|string₁ num₂|string₂ **ge** bool
num₁|string₁ num₂|string₂ **gt** bool
num₁|string₁ num₂|string₂ **le** bool
num₁|string₁ num₂|string₂ **lt** bool
bool₁|int₁ bool₂|int₂ **and** bool₃|int₃
bool₁|int₁ **not** bool₂|int₂
bool₁|int₁ bool₂|int₂ **or** bool₃|int₃
bool₁|int₁ bool₂|int₂ **xor** bool₃|int₃
- **true** true
- **false** false
int₁ shift **bitshift** int₂

Control operators

any **exec** -
bool proc **if** -
bool proc₁ proc₂ **ifelse** -
init incr limit proc **for** -
count proc **repeat** -
proc **loop** -
- **exit** -
- **stop** -
any **stopped** bool
- **countexecstack** int
array **execstack** subarray
- **quit** -
- **start** -

Type, attribute, and conversion operators

any **type** name
any **cvlit** any
any **cvx** any
any **xcheck** bool
array|file|string **executeonly** array|file|string
array|dict|file|string **noaccess** array|dict|file|string
array|dict|file|string **readonly** array|dict|file|string
array|dict|file|string **rcheck** bool
array|dict|file|string **wcheck** bool
num **cvi** int
string **cvn** name
num|string **cvr** real
any string **cvs** substring
num radix string **cvrs** substring

File operators

string₁ string₂ **file** file
file **closefile** -
file **read** *If end-of-file: byte true*
If not end-of-file: false
file int **write** -
file string **readhexstring** substring bool
file string **writexstring** -
file string **readstring** substring bool
file string **writestring** -

```

file string readline substring bool
file token If found: any true
           If not found: false
file bytesavailable int
- flush -
file flushfile -
file resetfile -
file status bool
string run -
- currentfile file
string print -
any = -
# any1 .. anyn stack # any1 .. anyn
any == -
# any1 anyn pstack # any1 anyn
- prompt -
bool echo -

```

Virtual memory operators

```

- save save
save restore -
- vmstatus level used maximum

```

Miscellaneous operators

```

proc bind proc
- null null
- usertime int
- version string

```

Graphics state operators

```

- gsave -
- grestore -
- grestoreall -
- initgraphics -
num setlinewidth -
- currentlinewidth num
int setlinecap -
- currentlinecap int
int setlinejoin -
- currentlinejoin int
num setmiterlimit -
- curentmiterlimit num
array offset setdash -
- currentdash array offset
num setflat -
- currentflat num
num setgray -
- currentgray num
hue satur bright sethsbcolor -
- currenthsbcolor hue satur bright
red green blue setrgbcolor -
- currentrgbcolor red green blue
frequency rotation proc setscreen -
- currentscreen frequency rotation proc
proc settransfer -
- currenttransfer proc

```

Coordinate system and matrix operators

```

- matrix matrix
- initmatrix -
matrix identmatrix matrix
matrix defaultmatrix matrix
matrix currentmatrix matrix
matrix setmatrix -
tx ty translate -
tx ty matrix translate matrix
sx sy scale -
sx sy matrix scale matrix
angle rotate -
angle matrix rotate matrix
matrix concat -
matrix1 matrix2 matrix3 concatmatrix matrix3
x y transform x' y'
x y matrix transform x' y'

```

```

xd yd dtransform xd' yd'
xd yd matrix dtransform xd' yd'
x' y' itransform x y
x' y' matrix itransform x y
xd' yd' idtransform xd yd
xd' yd' matrix idtransform xd yd
matrix1 matrix2 invertmatrix matrix2

```

Path construction operators

```

- newpath -
- currentpoint x y
x y moveto -
dx dy rmoveto -
x y lineto -
dx dy rlineto -
x y r ang1 ang2 arc -
x y r ang1 ang2 arcn -
x1 y1 x2 y2 r arcto xt1 yt1 xt2 yt2
x1 y1 x2 y2 x3 y3 curveto -
dx1 dy1 dx2 dy2 dx3 dy3 rcurveto -
- closepath -
- flattenpath -
- reversepath -
- strokepath -
string bool charpath -
- clippath -
- pathbbox llx lly urx ury
move line curve close pathforall -
- initclip -
- clip -
- eofclip -

```

Painting operators

```

- erasepage -
- fill -
- eofill -
- stroke -
width height bits/sample matrix proc image -
width height invert matrix proc imagemask -

```

Device setup and output operators

```

- showpage -
- copypage -
matrix width height proc banddevice -
matrix width height proc framedevice -
- nulldevice -
proc renderbands -

```

Character and font operators

```

key font definefont font
key findfont font
font num scalefont font'
font matrix makefont font'
font setfont -
- currentfont font
string show -
ax ay string ashow -
cx cy char ax ay string widthshow -
cx cy char ax ay string awidthshow -
proc string kshow -
string stringwidth wx wy
- FontDirectory dict
- StandardEncoding array

```

Font cache operators

```

- cachestatus bsz bmx msz mmx csz cmx maxbits
wx wy llx lly urx ury setcachedevice -
wx wy setcharwidth -
num setcachelimit -

```

PostScript