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**General**

ACTIVE,0	INT	SECP,id	TYPE
"	IMME	"	SUBTYPE
"	MENU	"	NAME
"	PRKEY	"	DATA nnn
"	UNITS	"	PROP AREA
"	ROUT	"	PROP IYY,IYZ,IZZ
"	TIME	WALL,CPU	PROP WARP
"	DBASE	LDATE	PROP TORS
"	DBASE	LTIME	PROP CGY,CGZ
"	REV	"	PROP SHCY,SHCZ
"	TITLE	see help files	PROP SCYY,SCYZ,SCZZ
"	JOBNAM	"	PROP OFFSET
"	PLATFORM	SECP,num	COUNT
"	NPROC	"	MAX
PARM,0	MAX	SHEL,n	TYPE
"	BASIC	"	NAME
"	LOC	Num	PROP TTHK
PARM,name	TYPE	"	NLAY
"	DIM	X,Y,Z	NSP
CMD,0	STAT	"	POS
"	NARGS	"	OFFZ
"	FIELD	2,3,...N	TS11
COMP,0	NCOMP	"	TS22
COMP,n	NAME	"	TS12
COMP,name	TYPE	"	HORC
"	NSCOMP	"	FUNC
"	SNAME	N	UT11

**Graphic**

GRAPH,0	ACTIVE	"	AMAS
"	ANGLE	"	MSCF
"	CONTOUR (1)	"	BSCF
"	DIST	"	DSTF
"	DSCALE	DMULT	LLEN
"	EDGE	"	LAYD LayerNumber,THIC
"	FOCUS	X, Y, Z	LayerNumber,MAT
"	GLINE	"	LayerNumber,ANGL
"	MODE	"	LayerNumber,NINT
"	NORMAL	"	SCTN,n 1
"	RANGE (2)	"	2
"	RATIO	X, Y	3
"	SSCALE	SMULT	4 CS#
"	TYPE	"	5 CS#
"	VCONE	ANGLE	6 CS#
"	VIEW	X, Y, Z	7 OR 8
"	VSCALE	VRATIO	9
"	DISPLAY	"	10
"	ERASE	"	11
"	NDIST	"	12
"	NUMBER	"	13
"	PLOPTS (3)	"	14 - 17
"	SEG	"	"
"	SHRINK	"	"

**PREP7**

ACTIVE,0	SEG	KP,n	NXTL
"	CSYS	"	DIV
"	DSYS	LINE,0	NUM MAX, MIN
"	MAT	"	NUM MIND, MAXD
"	TYPE	"	COUNT
"	REAL	"	LENG
"	ESYS	"	CENT X, Y, Z
"	CP	"	IOR X,Y,Z,XY,YZ,ZX
"	CE	"	IMC X,Y,Z,XY,YZ,ZX
"	WFRONT	MAX, RMS	IPR X, Y, Z
CDSY,cs#	LOC	X, Y, Z	IXV X, Y, Z
"	ANG	XY, YZ, ZX	IYV X, Y, Z
"	ATTR	(4)	IZV X, Y, Z
"	NUM	MAXD	LINE,n KP 1,2
"	NUM	MAXD, MIND	ATTR (8)
"	COUNT	"	LSEL
"	MXLOC	X, Y, Z	NXTH
"	MNLOC	X, Y, Z	LENG
NODE,n	LOC	X, Y, Z	AREA,0 NUM MAX, MIN
"	ANG	XY, YZ, ZX	NUM MAXD, MIND
"	NSEL	"	COUNT
"	NXTH	"	AREA
"	NXTL	"	VOLU
"	F	FX, MX, ...	CENT X, Y, Z
"	D	UX, ROTX, ...	IOR X,Y,Z,XY,YZ,ZX
"	HGEN	"	IMC X,Y,Z,XY,YZ,ZX
"	CPS	Lab	IPR X, Y, Z
ELEM,0	NUM	MAX, MIN	IXV X, Y, Z
"	NUM	MAXD, MIND	IYV X, Y, Z
"	COUNT	"	IZV X, Y, Z
ELEM,n	NODE	1,2, ...20	AREA,n ATTR (9)
"	CENT	X, Y, Z	ASEL
"	ADJ	1,2,...6	NXTH
"	ATTR	(5)	NXTL
"	LENG	"	AREA
"	LPROJ	X, Y, Z	LOOP 1,2,...,l
"	AREA	"	VOLU,0 NUM MAX, MIN
"	APROJ	X, Y, Z	NUM MAXD, MIND
"	VOLU	"	COUNT
"	ESEL	"	VOLU
"	NXTH	"	CENT X, Y, Z
"	NXTL	"	IOR X,Y,Z,XY,YZ,ZX
"	HGEN	"	IMC X,Y,Z,XY,YZ,ZX
"	HCOE	face	IPR X, Y, Z
"	TBULK	face	IXV X, Y, Z
"	PRES	face	IYV X, Y, Z
"	SHPAR	(6)	IZV X, Y, Z
KP,0	NUM	MAX, MIN	VOLU,n ATTR (10)
"	NUM	MAXD, MIND	VSEL
"	COUNT	"	NXTH
"	CENT	X, Y, Z	NXTL
"	IOR	X,Y,Z,XY,YZ,ZX	VOLU
"	IMC	X,Y,Z,XY,YZ,ZX	SHELL 1,2,...,m
"	IPR	X, Y, Z	ETYP,0 NUM MAX
"	IXV	X, Y, Z	NUM MAXC
"	IYV	X, Y, Z	NUM MAXD
"	IZV	X, Y, Z	ETYP,n ATTR (11)
"	MXLOC	X, Y, Z	RCON,n CONST 1,2,...,m
"	MNLOC	X, Y, Z	NUM MAXD
"	NRELM	element#	MPLAB,n TEMP val
KP,n	LOC	X, Y, Z	TBLAB, mat# -- see help files
"	ATTR	(7)	FLDAT,name -- see help files
"	KSEL	"	MSDAT,0 SPEC
"	NXTH	"	UGAS

**SOLU**

ACTIVE,0	ANTY	DTIME
"	SOLU	NCMLS
"	"	NCMSS
"	"	EQUIT
"	"	NCMIT
"	"	CNVG
"	"	MXDVL
"	"	RESFRQ
"	"	RESEIG
"	"	DSPRM
"	"	FOCV
"	"	MOCV
"	"	HFCV
"	"	MFCV
"	"	CSCV
"	"	CUCV
"	"	FFCV
"	"	DICV
"	"	ROCV
"	"	TECV
"	"	VMCV
"	"	SMCV
"	"	VOCV
"	"	PRCV
"	"	VECV
"	"	NC48
"	"	NC49
"	"	CRPRAT
"	"	PSINC

**SOLU, cont'd**

ELEM,0	MTOT	X, Y, Z
"	MC	X, Y, Z
"	IOR	X, Y, Z, XY, YZ, ZX
"	IMC	X, Y, Z, XY, YZ, ZX
"	FMC	X, Y, Z
"	MMOR	X, Y, Z
"	MMMC	X, Y, Z
MODE,num	FREQ	(IMAG)
"	PFACT	"
"	MCOEF	"
"	DAMP	"

**POST1**

ACTIVE,0	SET	LSTP	NODE,n	ECON
"	SET	SBST	"	YPLU
"	SET	TIME	"	TAUW
"	SET	FREQ	ELEM,n	SERR
"	RSYS	"	"	SDSG
NODE,n	U	X,Y,Z,SUM	"	TERR
"	ROT	X,Y,Z,SUM	"	TDSG
"	TEMP	"	"	SENE
"	PRES	"	"	TENE
"	VOLT	"	"	KENE
"	MAG	"	"	JHEAT
"	V	X,Y,Z,SUM	"	JS X,Y,Z
"	A	X,Y,Z,SUM	"	HS X,Y,Z
"	CURR	"	"	VOLU
"	EMF	"	"	ETAB Lab
"	ENKE	"	"	SMISC Snum
"	ENDS	"	"	NMISC Snum
"	RF	FX,FY,FZ,MX,MY,MZ	ETAB,0	NCOL MAX
"	S	X,Y,Z,XY,YZ	"	NLENG MAX
"	EPTO	X,Y,Z,XY,YZ	ETAB,column	LAB
"	EPEL	X,Y,Z,XY,YZ	"	ELEM elem.#
"	EPPL	X,Y,Z,XY,YZ	SORT,0	MAX
"	EPCR	X,Y,Z,XY,YZ	"	MIN
"	EPTH	X,Y,Z,XY,YZ	"	IMAX
"	EPSW	"	"	IMIN
"	NL	SEPL	SSUM,0	ITEM Lab
"	NL	SRAT	FSUM,0	ITEM Lab
"	NL	HPRES	PATH,0	MAX Lab
"	NL	EPEQ	"	MAXPATH
"	NL	PSV	"	MIN Lab
"	NL	PLWK	"	LAST Lab
"	TG	X,Y,Z,SUM	"	NODE
"	TF	X,Y,Z,SUM	"	ITEM Lab
"	PG	X,Y,Z,SUM	"	POINT n
"	EF	X,Y,Z,SUM	"	NVAL
"	D	X,Y,Z,SUM	"	SET n
"	H	X,Y,Z,SUM	"	NUMPATH
"	B	X,Y,Z,SUM	PATH,n	PATH NAME
"	FMAG	X,Y,Z,SUM	KCALC,0	K 1,2,3
"	HS	X,Y,Z	INTSRF,0	PRES Lab
"	BFE	TEMP	"	TAUW Lab
"	TTOT	"	PLNSOL,0	MAX
"	HFLU	"	"	MIN
"	HFLM	"	"	BMAX
"	COND	"	"	BMIN
"	PCOE	"	PRERR,0	SEPC
"	PTOT	"	"	TEPC
"	MACH	"	"	SERSM
"	STRM	"	"	TERSM
"	DENS	"	"	SENSM
"	VISC	"	"	TENSM
"	EVIS	"	SECTION,(12)	INSIDE SX,SY,SZ,SXY,SYZ, SXZ
"	CMUV	"	"	CENTER SX,SY,SZ,SXY,SYZ, SXZ
"	"	"	"	OUTSIDE SX,SY,SZ,SXY,SYZ, SXZ
"	"	"	SECR,,ALL	S MAX,MIN
"	"	"	"	EPTO MAX,MIN
"	"	"	"	EPH MAX,MIN
"	"	"	"	EPPL MAX,MIN
"	"	"	"	PLWK MAX,MIN
"	"	"	"	EPCR MAX,MIN
"	"	"	SECR,elem#	S X,XZ,XY
"	"	"	"	EPTO X,XZ,XY
"	"	"	"	EPH X,XZ,XY
"	"	"	"	EPPL X,XZ,XY
"	"	"	"	PLWK X,XZ,XY
"	"	"	"	EPCR X,XZ,XY

**Post 26**

INTSRF,(15)	FORCE	X,Y,Z	VARI,0	NSETS
"	MOMENT	X,Y,Z	VARI,num	EXTREM
TREF,0	ENER	"	"	VMAX
"	ENUM	"	"	TMAX
"	CEMIN	"	"	VMIN
"	CEMAX	"	"	TMIN
"	NTZN	"	"	VLAST
"	NSFN	"	"	TLAST
"	NSFE	"	"	CVAR
"	"	"	"	RTIME t
"	"	"	"	ITIME t
"	"	"	"	RSET Snum
"	"	"	"	ISET Snum

**Misc.**

OPT,0	TOTAL	PDS,0	NRSS
"	ITER	"	NSOL
"	FEAS set#	PDS,n	METH
"	TERM	"	NSIM
"	BEST	"	PLVL 1,2,3,4,5
TOPO,0	ACT	"	SAMP
"	TOELEM	"	RLAB see help files
"	LOADS	RAD,0	VFAVG
"	ITER	RUNST,0	RSPEED MIPS
"	MXIT	"	SMFLOP
"	CONV	"	VMFLOP
"	DIM	RUNST,0	RFILSZ TOTAL
"	KAXI	"	EMAT
"	POWP	"	EROT
"	NEV	"	ESAV
"	TOAC	"	FULL
"	LOWD	"	MODE
"	NTOC	"	RDSP
"	SFLAG	"	REDM
"	COMP	"	RFRQ
"	PORV	"	RGEOM
"	SET	"	RST
TOPO,elem#	DENS	"	TRI
TOPO,freq#	FRQI	"	TOTAL
TOPO,cons#	TCBO FLAG	RUNST,0	RTIMST
"	TCBF	"	TFIRST
TOPO,iter#	TOHO	"	TITER
"	TOHC CID	"	EQPREP
PDS,0	ANLN	"	SOLVE
"	ANLX	"	BSUB
"	ANLD	"	EIGEN
"	ASTP 1,2,3,4	"	ELFORM
"	CORR l,,j	"	ELSTRS
"	METH	"	NELM
"	NSIM	RUNST,0	RMEMRY WSREQ
"	NTRP	"	WSAVAIL
"	NTRV	"	DBPSIZE
"	PAR1 i	"	DBPDISK
"	PAR2 i	"	DBPMEM
"	PAR3 i	"	DBMEM
"	PAR4 i	"	SCRSIZE
"	PLVL 1,2,3,4,5	"	SCRAVAIL
"	RNAM see help files	"	IOMEM
"	SAMP	"	IOPSIZE
"	VDIS i	"	IOBUF
"	VNAM see help files	"	SOLMEM
RUNST,0	RWFRT	"	MAX
"	RMS	"	RMS
"	MEAN	"	MEAN

- (1) VMIN, VINC, NCONT
- (2) XMIN, XMAX, YMIN, YMAX
- (3) LEG1, LEG2, LEG3, INFO, FRAM, TITL, MINM, or VERT
- (4) KCS, KTHET, KPHI, PAR1, PAR2
- (5) MAT, TYPE, REAL, ESYS, PSTAT, LIVE, or SECN
- (6) ANGD, ASPE, JACR, MAXA, PARA, WARP
- (7) MAT, TYPE, REAL, ESYS, NODE, or ELEM
- (8) MAT, TYPE, REAL, ESYS, NNOD, NELM, NDIV, NDNX, SPAC, SPNX, KYND, KYSP, LAY1, or LAY2.
- (9) MAT, TYPE, REAL, ESYS, SECN, NNOD, NELM, or ESIZ
- (10) MAT, TYPE, REAL, ESYS, NNOD, or NELM
- (11) ENAM, KOP1, KOP2, ..., KOP9, KO10, KO11
- (12) MEMBRANE, BENDING, SUM, PEAK, and TOTAL
- (13) DENS, VISC, COND, MDIF
- (14) COF1, COF2, COF3
- (15) PRES, TAUW, and BOTH

**\*GET, Parname, Column1, Column2, Column3**

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## \*VPUT, Parname, Column1, Column2, Column3

## \*VGET, Parname, Column1, Column2, Column3

Other *V Functions	
*VABS, KABSR, KABS1, KABS2, KABS3	— Applies the absolute value function to array parameters.
*VCOL, NCOL1, NCOL2	— Specifies the number of columns in matrix operations
*VCUM, KEY	— Allows array parameter results to add to existing results.
*VEDIT, Par	— Allows numerical array parameters to be graphically edited.
*VFACT, FACTR, FACT1, FACT2, FACT3	— Applies a scale factor to array parameters.
*VFILL, ParR, Func, CON1, CON2, CON3, CON4, ..., CON10	— Fills an array parameter.
*VFUN, ParR, Func, Par1, CON1, CON2, CON3	— Performs a function on a single array parameter.
*VITRP, ParR, ParT, ParI, ParJ, ParK	— Forms an array parameter by interpolation of a table.
*VLEN, NROW, NINC	— Specifies the number of rows to be used in array parameter operations.
*VMASK, Par	— Specifies an array parameter as a masking vector.
*VOPER, ParR, Par1, Oper, Par2, CON1, CON2	— Operates on two array parameters.
*VPLOT, ParX, ParY, Y2, Y3, Y4, Y5, Y6, Y7, Y8	— Graphs columns (vectors) of array parameters.
*VREAD, ParR, Fname, Ext, Dir, Label, n1, n2, n3, NSKIP	— Reads data and produces an array parameter vector or matrix.
*VSCFUN, ParR, Func, Par1	— Determines properties of an array parameter.
*VSTAT	— Lists the current specifications for the array parameters.
*VWRITE, Par1, Par2, Par3, Par4, ..., Par10	— Writes data to a file in a formatted sequence.



### ANSYS Training Classes

- Taught by Experienced Engineers
- Intro, Intermediate and Advanced
- Hard to Find Classes like Multiphysics, Customization and HFSS
- Onsite and Custom Classes

Arizona | Colorado | New Mexico  
 Southern California | Utah

*VGET				*VPUT								
<b>/PREP7</b>		<b>/POST1</b>		<b>/POST1</b>								
NODE,n	LOC	X,Y,Z	TLAB -- See help files	NODE,n	D	X,Y,Z,SUM	NODE,n	U	X,Y,Z	NODE,n	B	X,Y,Z
"	ANG	XY,YZ,ZX,THXY,THYZ,THZX		"	H	X,Y,Z,SUM	"	ROT	X,Y,Z	"	FMAG	X,Y,Z
"	NSEL			"	B	X,Y,Z,SUM	"	TEMP		"	TTOT	
ELEM,n	NODE	1,2,--20		"	FMAG	X,Y,Z,SUM	"	PRES		"	HFLU	
"	GENT	X,Y,Z		"	TTOT		"	VOLT		"	HFLM	
"	ADJ	1,2,--6		"	HFLU		"	MAG		"	COND	
"	ATTR	MAT,TYPE,REAL,ESYS,ENAM,SECN		"	HFLM		"	V	X,Y,Z	"	PCOE	
"	GEOM			"	COND		"	A	X,Y,Z	"	PTOT	
"	ESEL			"	PCOE		"	CURR		"	MACH	
"	SHPAR	ANGD,ASPE,JACR,MAXA,PARA,WARP		"	PTOT		"	EMF		"	STRM	
KP,n	LOC	X,Y,Z		"	MACH		"	ENKE		"	DENS	
"	ATTR	MAT,TYPE,REAL,ESYS,NODE,ELEM		"	STRM		"	ENDS		"	VISC	
"	DIV			"	ENDS		"	S	X,Y,Z,XY,Y	"	EVIS	
"	KSEL			"	S	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	EPTOP	X,Y,Z,XY,Y	"	ECON	
LINE,n	KP	1,2		"	EPTOP	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	EPEL	X,Y,Z,XY,Y	"	YPLU	
"	ATTR	MAT,TYPE,REAL,ESYS,NNOD,NELM		"	EPEL	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	EPPL	X,Y,Z,XY,Y	"	TAUW	
"	AREA			"	EPPL	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	EPCR	X,Y,Z,XY,Y,ETAB,n	Lab		
"	ASEL			"	EPCR	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	EPTH	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV			
AREA,n	LOOP	1,2,...		"	EPTH	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	ELEM,n	ETAB	Lable			
"	LINE	1,2,...		"	EPSW			NL	SEPL			
"	ATTR	MAT,TYPE,REAL,ESYS,NNOD,NELM		"	NL	SEPL		"	SRAT			
"	AREA			"	"	SRAT		"	HPRES			
"	ASEL			"	"	HPRES		"	EPEQ			
VOLU,n	SHELL	1,2,...		"	"	EPEQ		"	PSV			
"	AREA	1,2,...		"	"	PSV		"	PLWK			
"	ATTR	MAT,TYPE,REAL,ESYS,NNOD,NELM		"	"	PLWK		"	TG	X,Y,Z		
"	VOLU			"	HS	X,Y,Z		"	TF	X,Y,Z		
"	VSEL			"	BFE	TEMP		"	PG	X,Y,Z		
CDSY,cs#	LOC	X,Y,Z		"	TG	X,Y,Z,SUM		"	EF	X,Y,Z		
"	ANG	XY,YZ,ZX,THXY,THYZ,THZX		"	TF	X,Y,Z,SUM		"	D	X,Y,Z		
"	ATTR	KCS,KTHET,KPHI,PAR1,PAR2		"	PG	X,Y,Z,SUM		"	H	X,Y,Z		
RCON,n	CONST	1,2,...		"	EF	X,Y,Z,SUM						

### Get Functions

Entity Status	Locations	Locations, cont'd	Nearest Entity, cont'd	Connectivity	Results cont'd	Data base manager	Other, cont'd	Filenames
NSEL(N)	CENTRX(E)	LSY(L,LFRAC)	KNEAR(K)	ENEXTN(N,LOC)	ROTZ(N)	VIRTINQR(1)	CHROCT (dp)	('directory','filename','extension')
ESEL(E)	CENTRY(E)	LSZ(L,LFRAC)	ENEARN(N)	NELEM(E,NPOS)	TEMP(N)	VIRTINQR(4)	CHRHEX(dp)	Path String = JOIN ('directory','filename')
KSEL(K)	CENTRZ(E)	Nearest	Areas	Faces	PRES(N)	VIRTINQR(7)	Strings	SPLIT('PathString', 'DIR')
LSEL(L)	NX(N)	NODE(X,Y,Z)	AREAND(N1,N2,N3)	ELADJ(E,FACE)	VX(N)	VIRTINQR(8)	StrOut = STRSUB (Str1, nLoc,nChar)	SPLIT('PathString', 'FILE')
ASEL(A)	NY(N)	KP(X,Y,Z)	AREAKP(K1,K2,K3)	NDFACE(E,FACE,LOC)	VY(N)	VIRTINQR(9)	StrOut = STRCAT(Str1,Str2)	SPLIT('PathString', 'NAME')
VSEL(V)	NZ(N)	Distances	ARNODE(N)	NMFACE(E)	VZ(N)	VIRTINQR(11)	StrOut = STRFILL(Str1,Str2,nLoc)	SPLIT('PathString', 'EXT')
Next Selected	KX(K)	DISTND(N1,N2)	Normals	ARFACE(E)	ENKE(N)	Filtering keywords.	StrOut = STRCOMP(Str1)	
NDNEXT(N)	KY(K)	DISTKP(K1,K2)	NORMNX(N1,N2,N3)	Results	ENDS(N)	KWGET(KEYWORD)	StrOut = STRLEFT(Str1)	
ELNEXT(E)	KZ(K)	DISTEN(E,N)	NORMNY(N1,N2,N3)	UX(N)	VOLT(N)	Other	nLoc = STRPOS(Str1,Str2)	
KPNEXT(K)	LX(L,LFRAC)	ANGLEN(N1,N2,N3)	NORMNZ(N1,N2,N3)	UY(N)	MAG(N)	VALCHR(a8)	nLoc = STRLENG(Str1)	
LSNEXT(L)	LY(L,LFRAC)	ANGLEK(K1,K2,K3)	NORMKX(K1,K2,K3)	UZ(N)	AX(N)	VALOCT (a8)	StrOut = UPCASE(Str1)	
ARNEXT(A)	LZ(L,LFRAC)	Nearest Entity	NORMKY(K1,K2,K3)	ROTX(N)	AY(N)	VALHEX(a8)	StrOut = LWCASE(Str1)	
VLNEXT(V)	LSX(L,LFRAC)	NNEAR(N)	NORMKZ(K1,K2,K3)	ROTY(N)	AZ(N)	CHRVAL (dp)		