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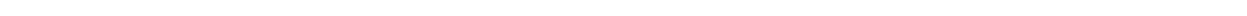
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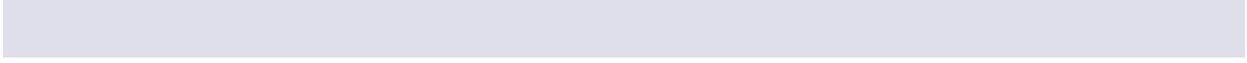
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AutoCAD (API)

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Microsoft Visual Basic for Applications (VBA) VBA VB
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, <\$nopcode>AutoCAD, <\$nopcode>AutoLISP, <\$nopcode>Automation,
<\$nopcode>IDE,<\$nopcode>MDE,<\$nopcode>MNU, <\$nopcode>VB,
<\$nopcode>VBA,<\$nopcode>VBA,<\$nopcode>, <\$nopcode>, <\$nopcode>,
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:, <\$nopcode>, <\$nopcode>: <\$nopcode>:, <\$nopcode>, <\$nopcode>,
<\$nopcode>, <\$nopcode>specbyte,<\$nopcode>, <\$nopcode>, <\$nopcode>:
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[AutoCAD 2008](#) > .>



AutoCAD CUI DIESEL

(API) AutoCAD

-
- “” “”
- “”
- **AutoCAD** (PGP) “acad.pgp” AutoCAD
- PGP “acad.pgp” AutoCAD **b BLOCK**
-
- CUI CUI
- DIESEL MODEMACRO AutoLISP ®
- ASCII PLOT “”

▪ **AutoLISP ObjectARX** [®] **AutoCAD** AutoCAD
QUIT

(API) AutoCAD .API

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[AutoCAD 2008](#) > .>



(PWT) “” HTML

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“”

- Web
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- Web
- Web

HTML

“ ”



[AutoCAD 2008](#) > . >



AutoCAD acad.pgp AutoCAD ASCII

- .
AutoCAD

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[AutoCAD 2008](#) > .> .>



AutoCAD AutoLISP ObjectARX

AutoCAD AutoCAD

“support” AutoCAD 2004 LOCALROOTPREFIX
ROAMABLEROOTPREFIX

LISP CUSTFILES Windows®

```
(defun c:custfiles ()  
  (command "shell"  
    (strcat "explorer \"" (getvar "roamablerootprefix") "\"")  
  )  
  (princ)  
)
```

- “”
-
- [OPTIONS](#) “”
- AutoCAD

AutoCAD

part5.dwg

: **insert**

[?]: **/files2/olddwgs/part5**

AutoCAD INSERT

AutoCAD AutoLISP AutoCAD

AutoCAD *Program Files* /AcadApps AutoLISP VBA

AutoCAD “acad.pgp” AutoLISP ObjectARX
AutoLISP ObjectARX

AutoCAD

1. ENTER AutoCAD HELP
2. AutoCAD (.)AutoCAD “”
3. AutoCAD
4. AutoCAD (“acad.pgp”)
5. AutoCAD AutoLISP ObjectARX
6. AutoCAD AutoCAD SETVAR
7. AutoCAD
- 8.

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- [AutoLISP](#)
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[AutoCAD 2008](#) > . > . >



AutoCAD “ acad2008.cfg”“”“”“”

AutoCAD “” “”

AutoCAD /c

- .

[AutoCAD 2008](#) > .> .>



```
"/AcadJobs"          /AcadJobs/Job1/Support  /AcadJobs/Job1
AutoLISP              support          support ""AutoCAD
                      /s      Customize Startup
```

```
AutoCAD "" AutoCAD REMEMBERFOLDERS
0
```

AutoCAD

```
@echo off
C:
if exist \AcadJobs\Jobs\%1 goto RUNACAD
echo.
echo *** Creating \AcadJobs\Jobs\%1
echo *** Press Ctrl+C to cancel.
echo.
pause
mkdir \AcadJobs\Jobs\%1
:RUNACAD
cd \AcadJobs\Jobs\%1
start C:\ AutoCAD\acad.exe
```

```
ASCII      "acad.bat"      C:\winnt""""
           "acad.bat"
```

acadjobname

jobname



[AutoCAD 2008](#) > . > . >





1. “” “” “”
2. “PTWTemplates” (BMP)
 - Template1“ ”
 - Template2“ ” HTML
 - Template3“ ” HTML
 - Template4“ ” HTML
3. “”
4. ALT+2 PTWTemplates “”
5. “PTWTemplates”
6. “”
7. (PWT) . htm . html
8. HTML
Web
- 9.
10. .pwt 3
PWT PWT PWT
“”



AutoCAD 2008 > .> __ > .>

(“acad.pgp”)



(“acad.pgp”)

- “” > “” > “(acad.pgp)”



AutoCAD 2008 > .> __ >



AutoCAD

AutoCAD

- Windows **starttypedir copy**
-
-
- VBA

AutoCAD “acad.pgp”acad.pgp ASCII

“acad.pgp” PGP

“” > “” > “ (acad.pgp)

“acad.pgp”

AutoCAD

command, [executable], flags[, []prompt[, return_code]]*

command

AutoCAD

executable

flags

0

1

2

4“”

8

2 4 2 AutoCAD 1 2 4

8 del 8

prompt

AutoCAD executable (*) ENTER

ENTER prompt

return_code

1 2 3 0 4

1 DXB AutoCAD “\$cmd.dxb” DXB DXB
“\$cmd.dxb” DXBIN

2 DXB AutoCAD “\$cmd.dxb” DXB prompt
AutoCAD DXB “\$cmd.dxb” I

(;)

Windows

Windows start cmd executable start cmd
AutoCAD

start start start Windows start start
start HTML

cmd AutoCAD Shell AutoCAD /c /k /c
/k /k exit

start AutoCAD cmd AutoCAD
Windows

RUNLISTSET DXB2BLK

RUN, cmd /c,0,*Batch file to run: ,
LISTSET,cmd /k SET,0

```
DXB2BLK,cmd /c DXBCOPY,0,DXB file: ,2
```

```
RUN /c cmd
```

```
LISTSET DOS cmd /k start AutoCAD start  
/realtime Windows
```

```
DXB2BLK DXB DXB
```

```
DXB2BLK DXB "dxbcopy" "$cmd.dxb" AutoCAD  
DXB DXB " dxbcopy.cmd" \
```

```
echo copy %1.dxb $cmd.dxb > dxbcopy.cmd
```

```
" dxbcopy.cmd" DOS "acad.pgp" dxbcopy.cmd  
D:\cad acad.pgp
```

```
DXB2BLK, cmd /c D:\CAD\DXBCOPY,0,DXB file: ,2
```

```
DXB "AutoCAD DXB " " Set Up Plotters and  
Printers"
```

AutoCAD 2008 > .> __ >



c **circle** CIRCLE [SAVE](#) CTRL+S

AutoCAD “acad.pgp” ASCII “acad.pgp”
PGP “” > “” > “ (acad.pgp)” (;)

“acad.pgp”

“ acad.pgp”

*abbreviation, *command*

*abbreviation command (*)*

(-)

BH, * -BHATCH
BD, * -BOUNDARY

AutoCAD “acad.pgp” **reinit** AutoCAD

[AutoCAD 2008](#) > .>



.lin

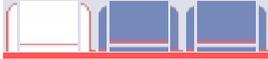
AutoCAD

— · — · —

LIN LIN LIN LIN LINETYPE LIN

AutoCAD LIN “*acad.lin*” “*acadiso.lin*”

AutoCAD 2008 > . >



A (;) LIN

**linetype_name, description*
A, descriptor1, descriptor2, ...

DASHDOT

**DASHDOT, Dash dot* — · — · — · — · — · — · —
A, .5, -.25, 0, -.25

0.5 0.25 0.25 0.5

— · — · — · — · — · — · —

LIN ASCII . *lin*

(*)

LIN “”“”

- ASCII

-

- “”

47

(A)

AutoCAD A

CENTRAL AutoCAD

AutoCAD AutoCAD

a A

-

-

- 0

12 LIN 80 AutoCAD

A 0 0 0A

AutoCAD 2008 > .>

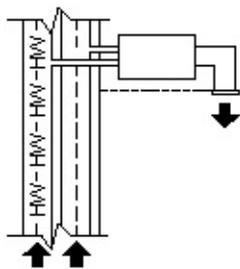


```
["text", textstyle, scale, rotation, xoffset, yoffset]
```

HOT_WATER_SUPPLY

```
*HOT_WATER_SUPPLY, ---- HW ---- HW ---- HW ---- HW ---- HW ----  
A, .5, -.2, ["HW", STANDARD, S=.1, R=0.0, X=-0.1, Y=-.05], -.2
```

```
0.5 0.2          HW 0.2 STANDARD 0.1  
0      X -0.1    Y -0.05 0.5
```



```
0.2 + 0.2 = 0.4      X -0.1
```

```
*HOT_WATER_SUPPLY, ---- HW ---- HW ---- HW ---- HW ---- HW ----
```

A, .5, -.1, ["HW", STANDARD, S=.1, R=0.0, X=0.0, Y=-.05], -.3

0.1 + 0.3 = 0.4 X

1-17 0.01

text

text style name

AutoCAD

scale

S= 0 S=

rotation

R= A=R= A= d r g
0

xoffset

X= X xoffset 0 S=

yoffset

Y= Y yoffset 0 S=

[AutoCAD 2008](#) > .>



```
[shapename,shxfilename] [ shapename,shxfilename,transform]
```

transform

R=##

A=##

S=##

X=## X

Y=## Y

1-170.01

transform

CON1LINE “ep.shx” CON1 “ep.shx”

```
*CON1LINE, --- [CON1] --- [CON1] --- [CON1]  
A,1.0, -0.25, [CON1,ep.shx], -1.0
```

```
[CAP, ep.shx, S=2, R=10, X=0.5]
```

ep.shx CAP 10 X 0.5

[DIP8, pd.shx, X=0.5, Y=1, R=0, S=1]

pd.shx DIP8 X 0.5 Y

[shapename, shapefilename, scale, rotate, xoffset, yoffset]

shapename

shapename

shapefilename

(SHX) *shapefilename*
shapefilename

scale

S=value 0 *S=value*

rotate

R=value *A=value**R=* *A=* d r
g 0

xoffset

X=value X *xoffset* 0 S=

yoffset

Y=value Y *yoffset* 0 S=

■



1. **-linetype**
2. **c**
3. ENTER
255 (\$) (-) ()
4. “”” LIN “”

5.

6. “”

-
-
-
-
-
-

7. ENTER

LINETYPE “”

[AutoCAD 2008](#) > .> .>



1. .
 2. `["text",textstylename,scale,rotation,xoffset,yoffset]`
 3. ENTER LINETYPE
-
-

AutoCAD 2008 > __ >



AutoCAD “acad.pat” “acadiso.pat”

31

**pattern-name, description*

angle, x-origin, y-origin, delta-x, delta-y, dash-1, dash-2, ...

“” ANSI31



*ANSI31, ANSI Iron, Brick, Stone masonry
45, 0, 0, 0, .125

*ANSI31 ANSI Iron, Brick, Stone masonry 45
(0,0) 0.125

- 80 () (-) (\$)
- AutoCAD
-

- x
- y
-

AutoCAD (setenv "MaxHatch" "n") MaxHatch n
100 10000000

MaxHatch MaxHatch

AutoCAD 2008 > __ >



0

“” ANSI33



```
*ANSI33, ANSI Bronze, Brass, Copper  
45, .176776695,0, 0, .25, .125, -.0625
```

45 0.5 0.5

```
*DASH45, Dashed lines at 45 degrees  
45, 0,0, 0, .5, .5, -.5
```

45 0.5 0.5 0.5 0.25 0.25

```
*DDOT45, Dash-dot-dash pattern: 45 degrees  
45, 0,0, 0, .5, .5, -.25, 0, -.25
```

X

```
*GOSTAK  
0, 0,0, 0, .5, .5, -.5
```

0.5

X

*SKEWED
0, 0, 0, .5, .5, .5, -.5

delta-x 0.5

X 0.5

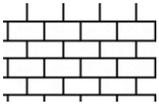


AutoCAD 2008 > __ >



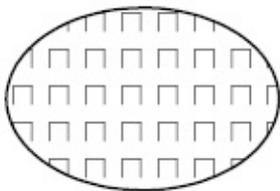
0,0

“” AR-B816



```
*AR-B816, 8x16 Block elevation stretcher bond  
0, 0,0, 0,8  
90, 0,0, 8,8, 8,-8
```

U 0.5



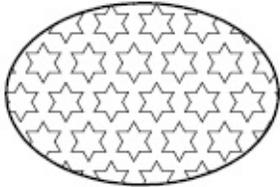
```
*IUS, Inverted U's  
90, 0,0, 0,1, .5,-.5  
0, 0,.5, 0,1, .5,-.5  
270, .5,.5, 0,1, .5,-.5
```

0,0 0,.5 .5,.5

```
90, .5,0, 0,1, .5,-.5
```

```
270, .5, 1, 0, 1, -.5, .5
```

180



0.866 60

AutoCAD

```
*STARS, Star of David  
0, 0, 0, 0, .866, .5, -.5  
60, 0, 0, 0, .866, .5, -.5  
120, .25, .433, 0, .866, .5, -.5
```

AutoCAD 2008 > __ > .>



1. Microsoft [®] Windows [®] ASCII “acad.pat” “acadiso.pat”

2. 31

3.

4.

-
- X, Y
- $x = 0$
- y



AutoCAD 2008 > __ > .>



1. ASCII *“acad.pat”“acadiso.pat”*
 2. 31
 - 3.
 4.
 -
 - X, Y
 - x
 - y
 -
 -
 -
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-
-

AutoCAD 2008 > __ > .>



1. ASCII *“acad.pat”“acadiso.pat”*
 2. 31
 - 3.
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 - *X, Y*
 - *x*
 - *y*
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 - 5.
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(CUI) CUI AutoLISP CUI CUI CUI
CUI CUI CUI

“”

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- CUI
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- CUI CUI
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AutoCAD “”
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“” MNU MNS MNU MNS CUI
CUI XML
- CUI
CUI CUI CUI
- CUI
CUI CAD CUI

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(-) ()	(&L)
	XY Z : SCALE
	\$M=\$(if,\$(eq,\$(substr,\$(getvar,cmdnames),1,4),GRIP),_scale,^C^C_scale)
ID	ID_Scale
16 × 16 ID (-) () “ ”“” ...	RCDATA_16_SCALE

32 × 32 ID

RCDATA_16_SCALE

32 × 32

(-) ()

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...

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ID		ID_MnFile

POP1 POP499 POP1 POP16

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[AutoCAD 2008](#) > . >



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AutoCAD

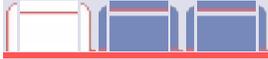


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CTRL+O CTRL+S “”“”“”
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CUI		
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		^C^C_qsave

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ID		ID_Save

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	“ ... ” “”	SHIFT+E
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2	AutoCAD	

ALT+F11	Visual Basic
ALT+F8	“”
CTRL+0	“”
CTRL+1	“”
CTRL+2	
CTRL+3	“”
CTRL+4	“”
CTRL+6	“”
CTRL+7	“”
CTRL+8	“”
CTRL+9	
CTRL+A	
CTRL+SHIFT+A	
CTRL+B	
CTRL+C	
CTRL+SHIFT+C	
CTRL+D	“ UCS”
CTRL+E	

CTRL+F	
CTRL+G	
CTRL+H	PICKSTYLE
CTRL+I	COORDS
CTRL+J	
CTRL+L	
CTRL+M	
CTRL+N	
CTRL+O	
CTRL+P	
CTRL+R	
CTRL+S	
CTRL+SHIFT+S	“”
CTRL+T	
CTRL+V	
CTRL+SHIFT+V	
CTRL+X	
CTRL+Y	“”
CTRL+Z	

CTRL+[
CTRL+\	
CTRL+PAGE UP	
CTRL+PAGE DOWN	
F1	
F2	
F3	OSNAP
F4	TABMODE
F5	ISOPLANE
F6	UCSDETECT
F7	GRIDMODE
F8	ORTHOMODE
F9	SNAPMODE
F10	“”
F11	“”
F12	“”

[Override Object Snap Settings](#)

F3	OSNAP
F6	UCSDetect
F8	ORTHOMODE
F9	SNAPMODE
F10	“”
F11	“”
F12	“”
SHIFT	ORTHOMODE
SHIFT+’	SNAPMODE
SHIFT+,	:
SHIFT+.	“”
SHIFT+/ SHIFT+;	UCSDetect
SHIFT+]]	“”
SHIFT+A	OSNAP
SHIFT+C	:
SHIFT+D	
SHIFT+E	:

SHIFT+L	
SHIFT+M	:
SHIFT+P	:
SHIFT+Q	“”
SHIFT+S	
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SHIFT+X	“”
SHIFT+Z	UCSDETECT

“” CUI

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“” CUI “”

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	CUI		
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ID	CUI	ID	DC_0002

“” (DXF TM) DXF
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“acad.cui”“

BLOCKREF

ATTBLOCKREF

DYNBLOCKREF

ATTDYNBLOCKREF

XREF

PROPERTIES

“*acad.cui*” (CUI) “”

ATTDEF	DDEDIT
ATTBLOCKREF	EATTEDIT
ATTDYNBLOCKREF	EATTEDIT
BLOCKREF	\$M=\$(if,\$(and,\$(>,\$(getvar,blockeditlock),0)),^C^C.
DYNBLOCKREF	\$M=\$(if,\$(and,\$(>,\$(getvar,blockeditlock),0)),^C^C.
HATCH	HATCHEDIT
IMAGE	IMAGEADJUST
LWPOLYLINE	PEDIT
MLINE	MLEDIT
MTEXT	MTEDIT

POLYLINE	PEDIT
SPLINE	SPLINEDIT
TEXT	DDEDIT
XREF	REFEDIT

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Windows “”“”

SHIFT CTRL “”“”“SHIFT+
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AutoLISP



AutoLISP LISP MNL “” AutoLISP CUI

AutoLISP [AutoLISP Visual LISP](#)

CUI CUI CUI MNL

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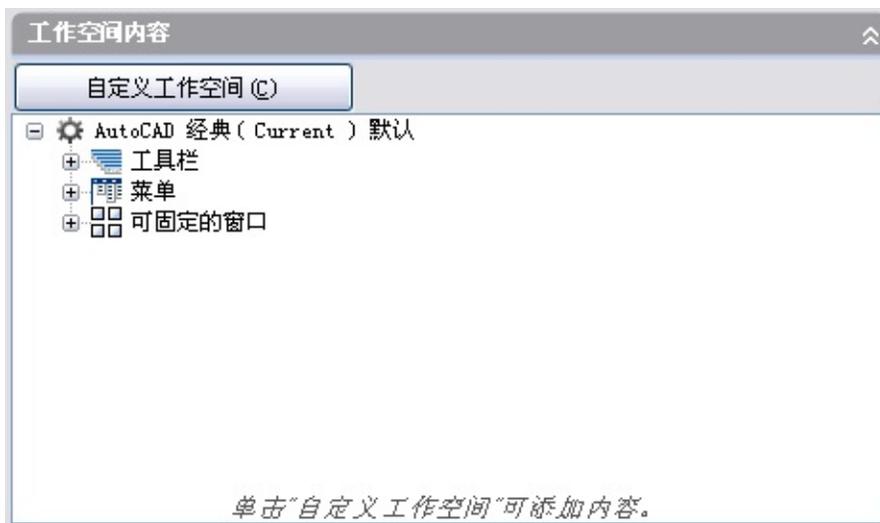
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CUI CUI

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FAQ



FAQ (CUI)

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AutoCAD 2008

AutoCAD CUI CUI /w AutoCAD 2008

CUI “”

AutoCAD Windows “”“”“”

“ C:\Documents and Settings\<>\Application Data\Autodesk\<>\<>\<>\<>\Support\Icons”

CUI “”

AutoCAD

AutoCAD AutoCAD CUI

CUI “”“”“”“”“”

CUI

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0DBLCLKEDIT 1

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CUI CUI CUI CUI CUI

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AutoCAD 2008

(MNS)

ASCII AutoCAD 2005 AutoCAD
AutoCAD CUSTOMIZE MNS CUI CUI “”
MNS CUI

(MNU)

ASCII MENU MENULOAD MNU AutoCAD
MNS MNU AutoCAD 2005 MNS MNU CUI
CUI “” MNU CUI

(CUI)

XML “”CUI AutoCAD 2006 MNUMNS
MNC

CUI AutoCAD

“acad.cui” CUI

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CUI CUI CUI CUI

CUI CUI AutoCAD CUI CUI

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LISP, <\$nopcode>:

[AutoCAD 2008](#) > .> .>



AutoCAD 2006

DIESEL AutoLISP

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CUI XML XML CUI CUI

AutoCAD 2008

CUI			
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MNU	ASCII	CUI	XML
	MNU		CUI
	“acad.mnu”		“acad.cui”
			CUI

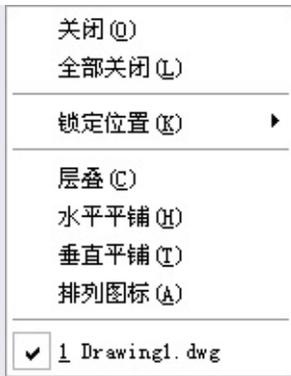
MNU				
MNS	MNU ASCII	CUI		XML CUI "acad.cui" CUI
MNC	ASCII	CUI		XML CUI "acad.cui" CUI
MNL	LISP AutoLISP	MNL		
MNR		MNR		

CUI

AutoCAD 2006 AutoCAD 2006 ""

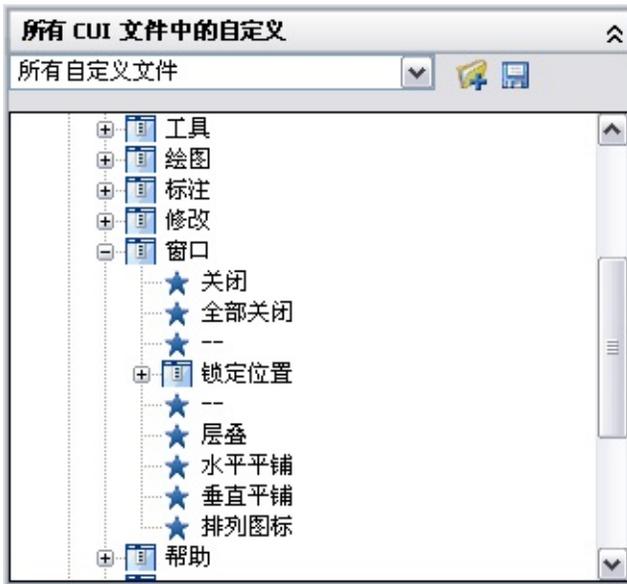
"" "acad.mnu"

"acad.mnu" ""	
""	***POP10 **WINDOW ID_MnWindow [&Window]



ID_DWG_CLOSE [Cl&ose]^C^C_close
 ID_WINDOW_CLOSEALL [C&lose All]^C^C_closeall
 [--]
 ID_WINDOW_CASCADE [&Cascade]^C^C_syswindows;_cascade
 ID_WINDOW_TILE_HORZ [Tile &Horizontally]^C^C_syswindows;_hor
 ID_WINDOW_TILE_VERT [&Tile Vertically]^C^C_syswindows;_vert
 ID_WINDOW_ARRANGE [&Arrange Icons]^C^C_syswindows;_arrange

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特性	
<div style="display: flex; justify-content: space-between; align-items: center;"> ☰ ☑ ☰ </div>	
基本	
名称	窗口 (&W)
说明	
高级	
别名	POP10, WINDOW
元素 ID	ID_MnWindow

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特性	
<div style="display: flex; justify-content: space-between; align-items: center;"> ☰ ☑ ☰ </div>	
基本	
名称	关闭 (&O)
说明	关闭当前图形: CLOSE
宏	
宏	^C^C_close
高级	
元素 ID	ID_DWG_CLOSE
图像	
小图像	
大图像	

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特性	
<div style="display: flex; justify-content: space-between; align-items: center;"> ☰ ☑ ☰ </div>	
基本	
名称	全部关闭 (&L)
说明	
宏	
宏	^C^C_closeall
高级	
元素 ID	ID_WINDOW_CLOSEALL
图像	
小图像	
大图像	

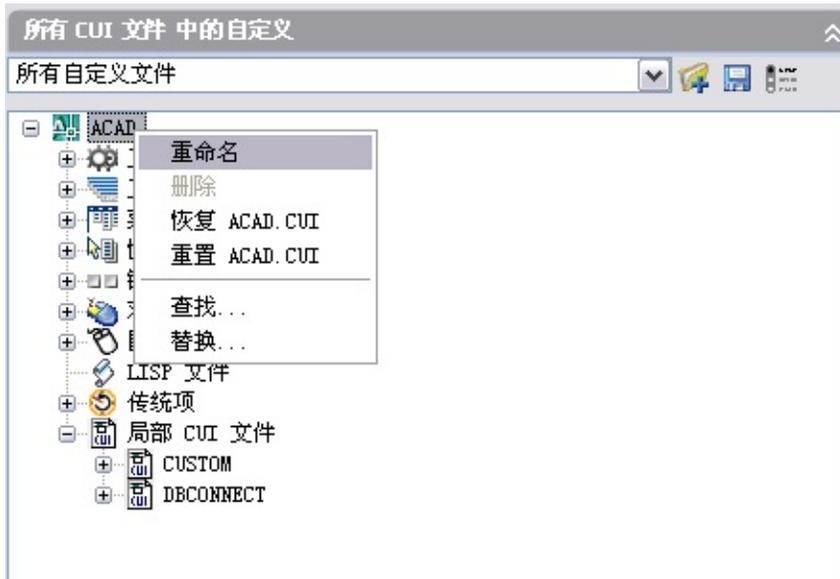
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AutoCAD CUI

CUI “acad.cui” ACAD

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CUI AutoCAD CUI ID CUI

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[AutoCAD 2008](#) > .> .>



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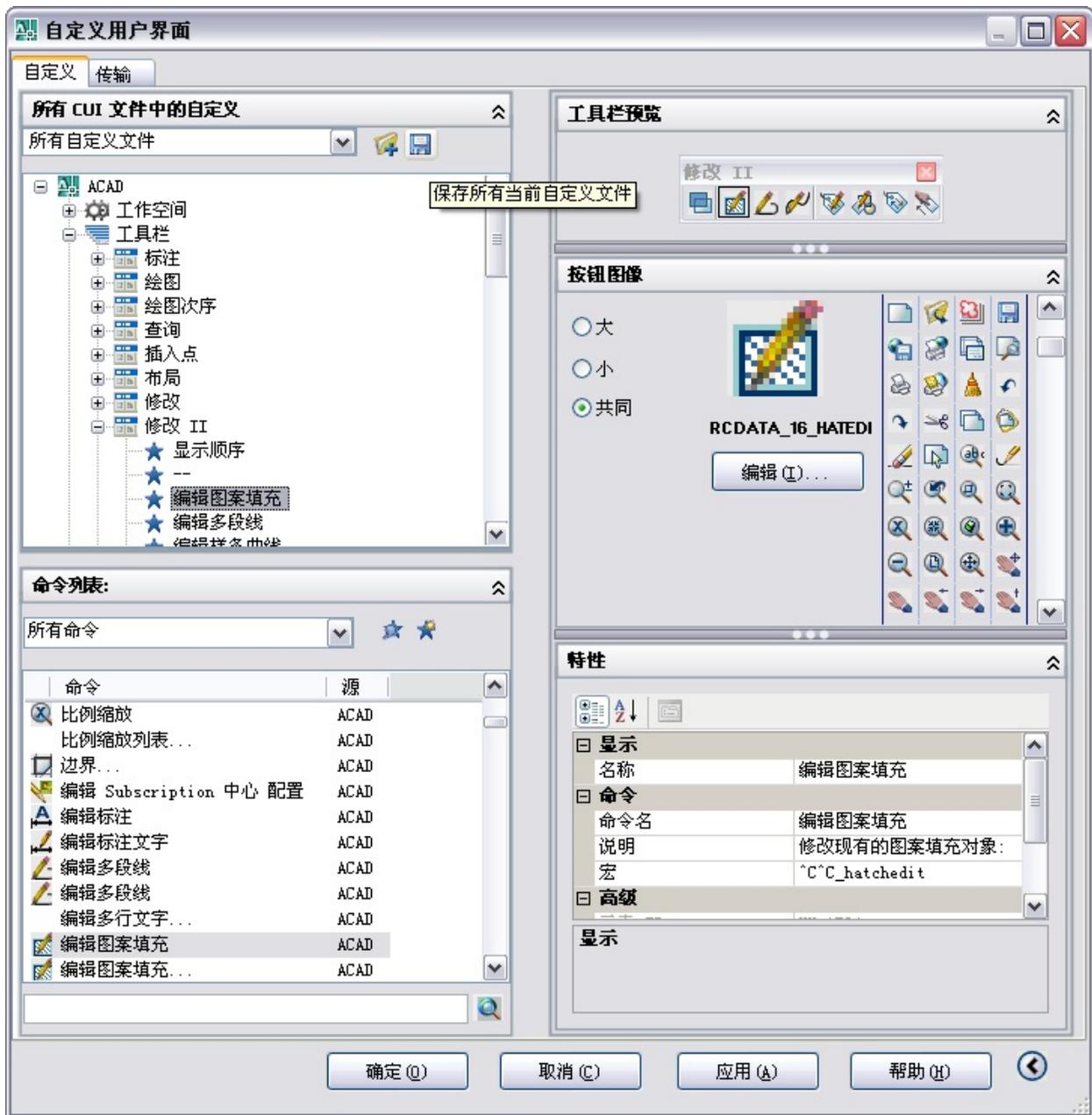
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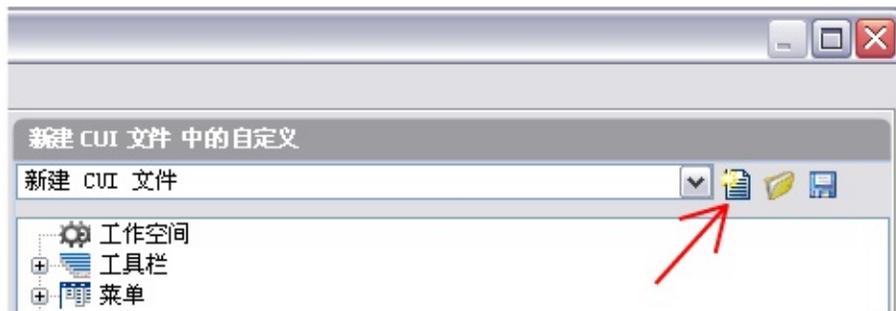
[CUI CUI](#)

[CUI CUI](#)

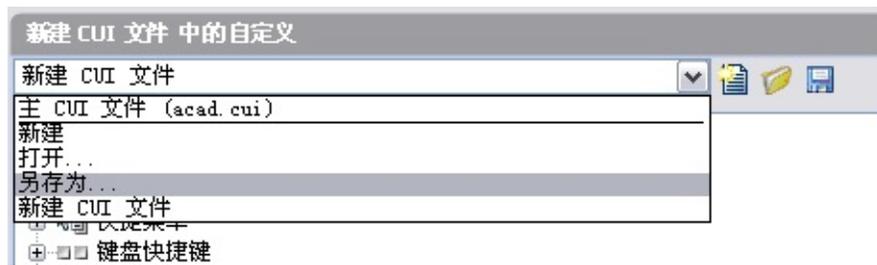




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2. “”“”“”



3. “”



4. “”“”
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CUI CUI

1. Windows

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2. CUI “enterprise.cui” CUI CUI CUI

AutoCAD 2008 > .> .> .>



1. “” > “” > “”
2. “”“”“” <> ”
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1. “” > “” > “”
2. “”“”“” <> ”
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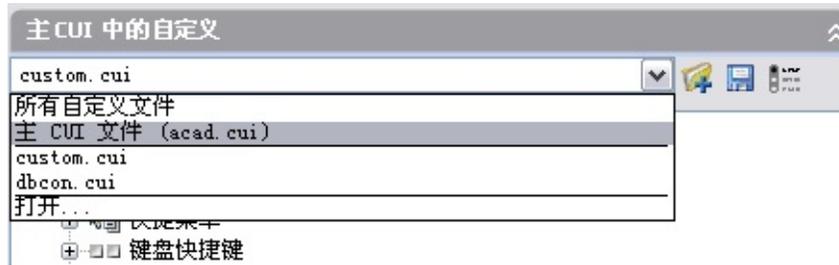


4. “”
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1. “” > “” > “”

2. “ <> ” CUI



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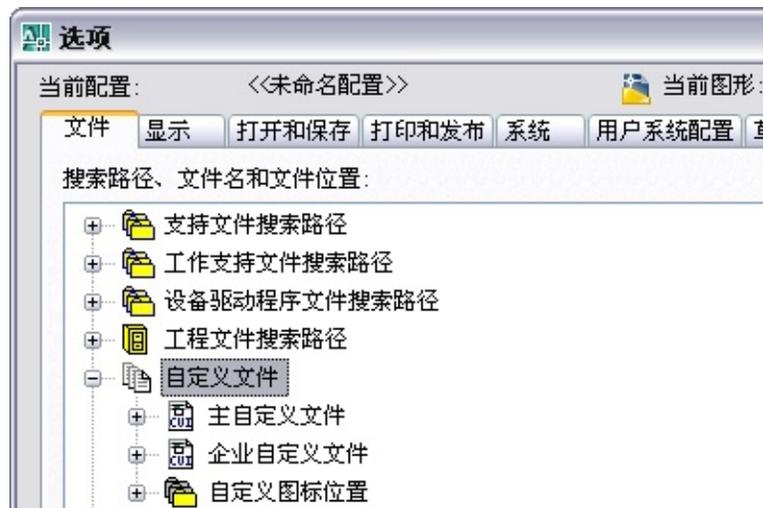


4. “”

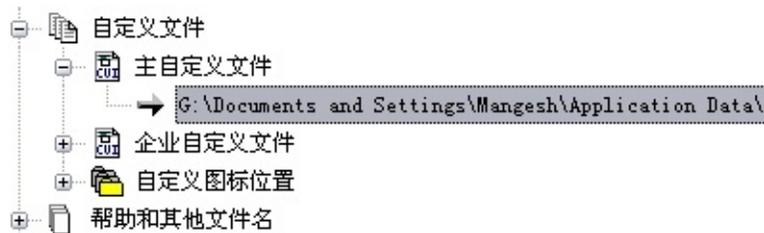


CUI CUI

1. “” ➤ “”
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CUI



AutoCAD 2008 > . > . > . >



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CTRL+C “ <> ”CTRL+V

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“ <> ”

CTRL+D

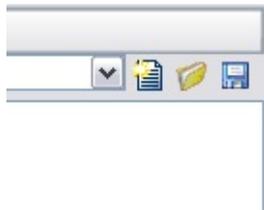
4. “”

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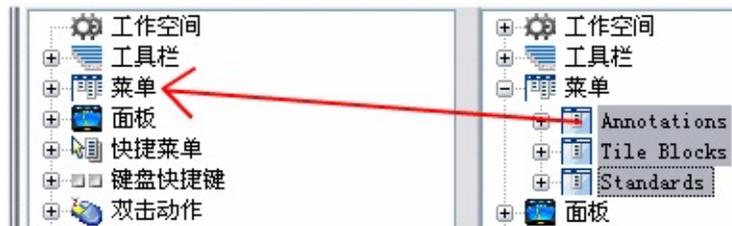
3. “”MNUMNS CUI

4. “”

5. “”MNUMNS CUI

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8. “”

[AutoCAD 2008](#) > . > . > [CUI](#) >

CUI



CUILOAD CUI

1. **cuiload**
 2. “/”“” CUI “”
 3. “”“”
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AutoCAD 2008 > . > . > CUI >

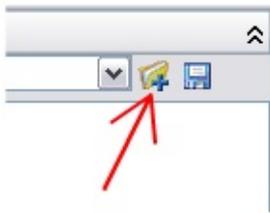
CUI



“” CUI

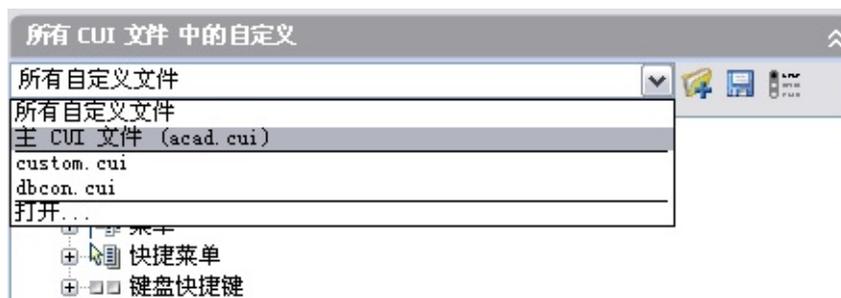
1. “” > “” > “”

2. “”“”“” <> ”“ CUI ”“”



3. “” CUI “”
CUI CUI “” CUI

4. CUI “” CUI



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[AutoCAD 2008](#) > . > . > [CUI](#) >

CUI



CUIUNLOAD CUI

1. **cuiunload**
 2. “/”“” CUI
 3. “”“”
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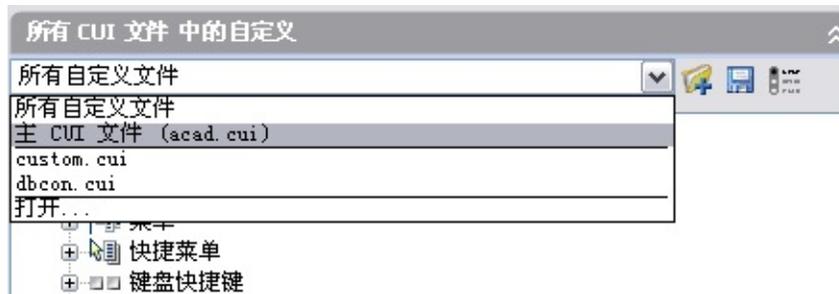
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“” CUI

1. “” > “” > “”
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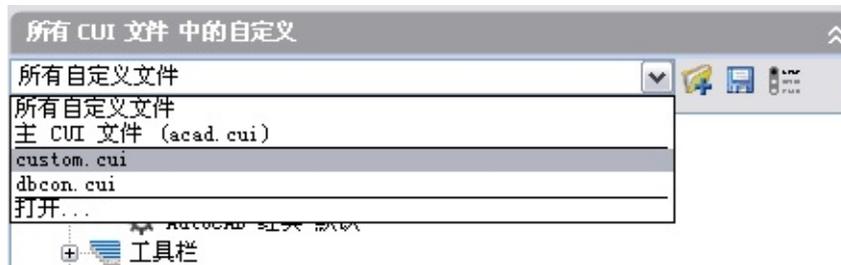
5. “”

CUI

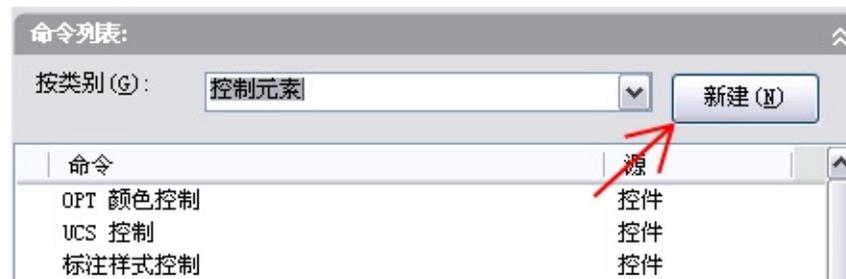


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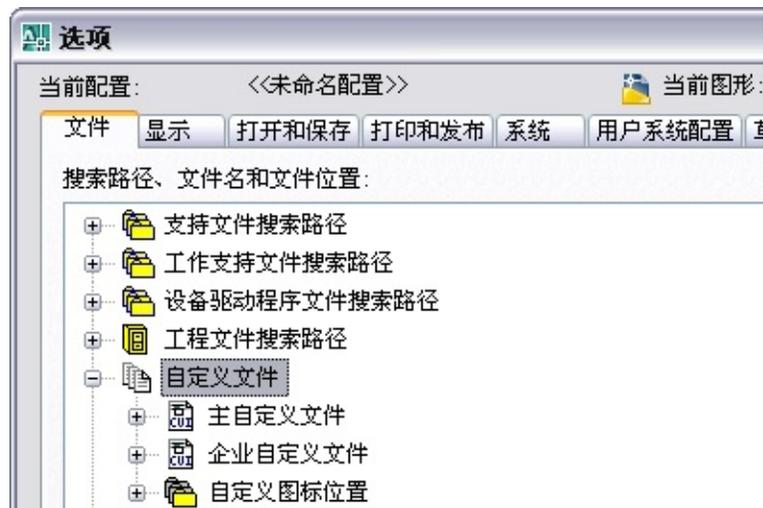
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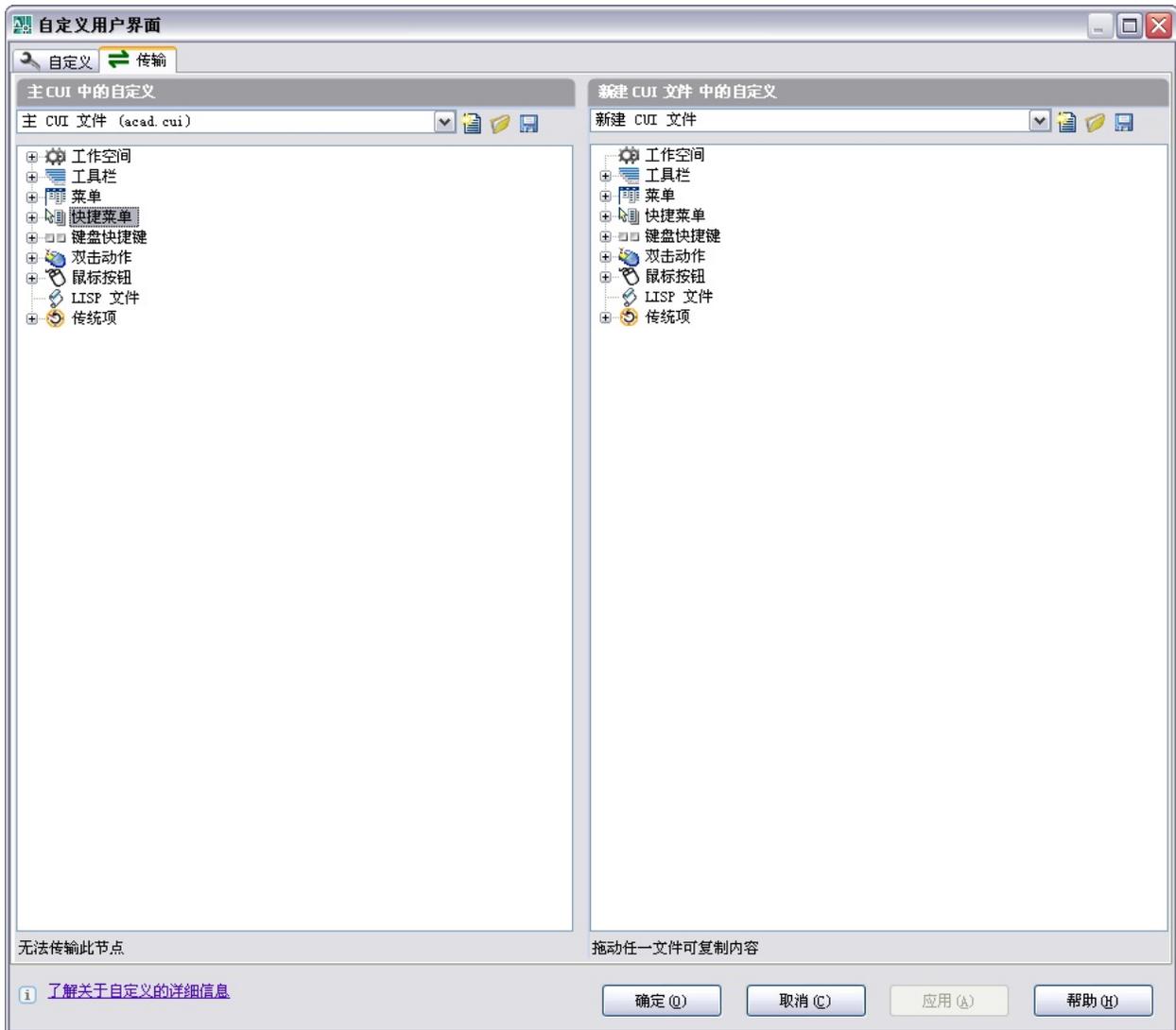
“”“”“” (Windows) > “”“”
“Autodesk” > “[Autodesk] ” > “”“”“”“”“”

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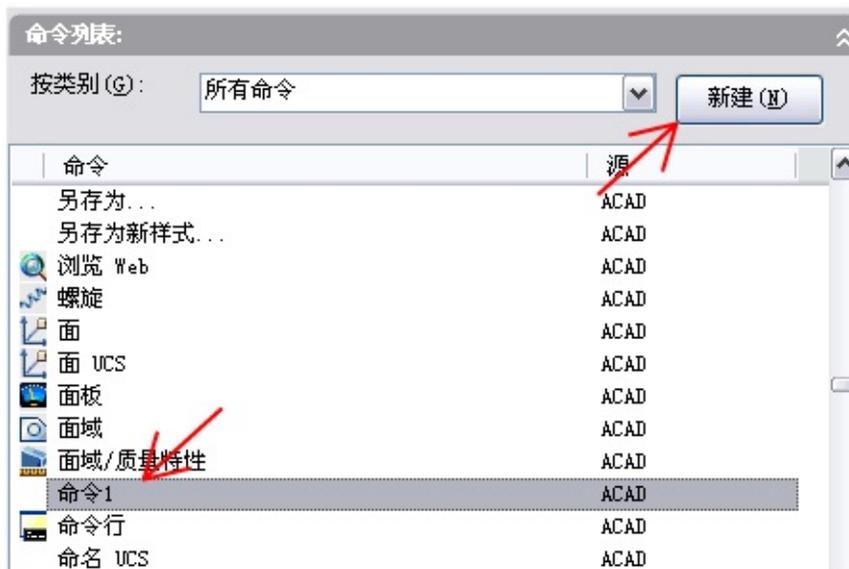
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1. “” > “” > “”
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特性: ^

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☐ **基本**

名称	命令1
说明	

☐ **宏**

宏	^C^C
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☐ **高级**

元素 ID	MMU_0001
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☐ **图像**

小图像	
大图像	

名称
显示宏名。

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4. UI “”



CTRL+C “” CTRL+V



1. “” > “” > “”
2. “”“”“”
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CTRL+D



CUI

1. “” > “” > “”

2. “”“” <> ”“”



3. “”“”

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- CUI “” CUI



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■ “”

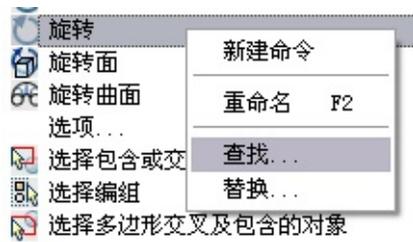


4. ""
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2. “”“”“” <> ”“”



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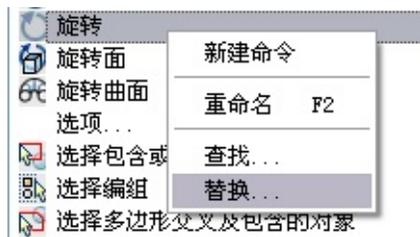
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4. “”“” (~)



5. “”
CUI





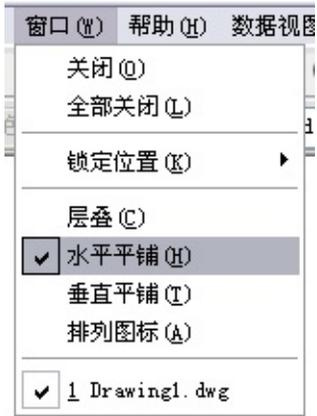
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5. BMP “”“”

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1. “” > “” > “”
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命令	
名称	标注, 翻转箭头
说明	将标注箭头翻转到尺寸界线相邻的一
宏	^C^C_ai dimfliparrow
高级	
元素 ID	ID_DimFlipArrow
图像	
小图像	
大图像	

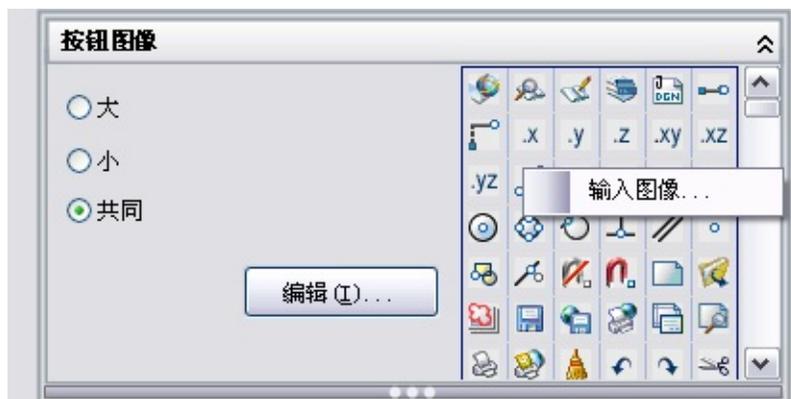
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1. “” ➤ “” ➤ “”
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4. “”“”

命令	
名称	取消
说明	
宏	^C^C
高级	
元素 ID	MM_0003
图像	
小图像	
大图像	

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命令：
命令：



[AutoCAD 2008](#) > .> .>



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UI CUI /

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CUI

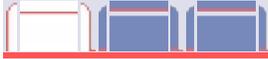
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DIESEL DIESEL

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 放弃 (U) Cui	CTRL+Z
 重做 (R)	CTRL+Y
<hr/>	
 剪切 (T)	CTRL+X
 复制 (C)	CTRL+C
带基点复制 (B)	CTRL+SHIFT+C
复制链接 (L)	
 粘贴 (P)	CTRL+V
粘贴为块 (K)	CTRL+SHIFT+V
粘贴为超链接 (H)	
粘贴到原坐标 (Q)	
选择性粘贴 (S)...	
<hr/>	
 清除 (A)	Del
 全部选择 (L)	CTRL+A
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OLE 链接 (Q)...	
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 查找 (F)...	

DIESEL “”“” DIESEL MOVE

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$(if,$(getvar,cmdactive),~)MOVE^C^C_move
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AutoLISP **menucmd**

(! .) “”“”

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 放弃 (U) Cui	CTRL+Z
 重做 (R)	CTRL+Y
<hr/>	
 剪切 (T)	CTRL+X
 复制 (C)	CTRL+C
带基点复制 (B)	CTRL+SHIFT+C
<input checked="" type="checkbox"/> 复制链接 (L)	
 粘贴 (P)	CTRL+V
粘贴为块 (K)	CTRL+SHIFT+V
粘贴为超链接 (H)	
粘贴到原坐标 (Q)	
选择性粘贴 (S)...	
<hr/>	
 清除 (A)	Del
 全部选择 (L)	CTRL+A
<hr/>	
OLE 链接 (O)...	
<hr/>	
 查找 (F)...	

DIESEL DIESEL “”“”

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$(if,$(getvar,orthomode),!.)Ortho^O
$(if,$(getvar,snapmode),!.)Snap^B
$(if,$(getvar,gridmode),!.)Grid^G
```

AutoLISP **menucmd**

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~!. labeltext
!~ labeltext
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(~) (!)

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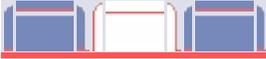
 放弃 (U) Cui	CTRL+Z
 重做 (R)	CTRL+Y
<hr/>	
 剪切 (T)	CTRL+X
 复制 (C)	CTRL+C
带基点复制 (B)	CTRL+SHIFT+C
<input checked="" type="checkbox"/> 复制链接 (L)	
 粘贴 (P)	CTRL+V
粘贴为块 (K)	CTRL+SHIFT+V
粘贴为超链接 (H)	
粘贴到原坐标 (Q)	
选择性粘贴 (S)...	
<hr/>	
 清除 (A)	Del
 全部选择 (L)	CTRL+A
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OLE 链接 (O)...	
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DIESEL

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“”



Autodesk BMP BMP CUI

16 x 16 32 x 32

-
- .
 - .
 - .
 - .
 - .
-



[AutoCAD 2008](#) > .> .> .>



[AutoCAD 2008](#) > . > . >



“”



[AutoCAD 2008](#) > .> .>



(^) CTRL (^G) (^C)

“” (\) (;) ENTER

```
text \.4 0 DRAFT Inc;;;Main St.;;;City, State;
```

[TEXT](#) (;;;) TEXT

;	ENTER
^M	ENTER
^I	TAB
[]	
\	
.	AutoCAD UNDEFINE
-	AutoCAD

=*	
*^C^C	
\$	DIESEL (\$M=)
^B	“” CTRL + B
^C	ESC
^D	UCS CTRL + D
^E	CTRL + E
^G	“” CTRL + G
^H	BACKSPACE
^O	
^P	MENUECHO
^Q	CTRL + Q
^T	CTRL + T
^V	
^Z	

[AutoCAD 2008](#) > .> .>



(\)

```
circle \1
```

Circle \1 1

```
-layer off \;
```

(-layer) [LAYER](#)"" (off) (\) LAYER (;)

LAYER ENTER (;) ENTER

[SELECT](#) (\) SELECT

```
select \change previous ;properties color red ;
```

SELECT (select \) CHANGE (change)""
(previous;) (properties color red ;)

(\) (/) /direct/file

-
- X/Y/Z
- SELECT
-
-

[PICKADD](#) [PICKAUTO](#) 1 0 AutoCAD



[AutoCAD 2008](#) > . > . >



AutoCAD ()

[AutoCAD 2008](#) > .> .>



AutoCAD (.) UNDEFINE

[AutoCAD 2008](#) > .> .>



(*)

*^C^C ESC

*^C^C ^C

*^C^Cmove Single
*^C^Ccopy Single
*^C^Cerase Single
*^C^Cstretch Single Crossing
*^C^Crotate Single
*^C^Cscale Single

[AutoCAD 2008](#) > .> .>



“”

*^C^Cerase single

[ERASE](#) ESC

[AutoCAD 2008](#) > .> .>



CUI CUI

\$section=menugroup.menuname

\$

section

A1-A4 1 4

B1-B4 1 4

P0-P16 0 16

I

S

T1-T4 1 4

infogroup

menuname

menuname CUI

menuname

\$S=PARTS
\$T1=EDITCMDS

\$S=ARCSTUFF ARC
ARC \$S=ARCSTUFF

ARC ARCSTUFF

<\$nopage>,

[AutoCAD 2008](#) > .> .>



DIESEL

```
$M=expression
```

```
$M= AutoCAD DIESEL expression DIESEL
```

```
FILLMODE $M=$( -,1,$(getvar,fillmode))
```

```
1 FILLMODE FILLMODE FILLMODE 1  
0
```

DIESEL “if-then” ENTER
(ENTER)

^Z AutoCAD

^Z ^ Z CTRL + Z

^Z

```
^C^C$M=$(if,$(=,$(getvar,tilemode),0),$S=mview _mspace )^Z  
^C^C$M=$(if,$(=,$(getvar,tilemode),0),$S=mview _pspace )^Z
```

^Z AutoCAD (ENTER)

■

- [DIESEL](#)



[AutoCAD 2008](#) > .> .>

AutoLISP



AutoLISP AutoCAD

AutoLISP AutoLISP AutoLISP MNL AutoCAD
CUI MNL

“” AutoLISP AutoLISP AutoCAD
Reference AutoLISP Developer's Guide

AutoLISP
“” > “” > “”

```
(menucmd "Gmenugroup.element_ID=|")
```

AutoCAD *AutoLISP Reference*

[Set WINWID][Set WALLTHK][Insert Window]

```
^C^C^P(setq WINWID (getreal "Enter window width: ")) ^P  
^C^C^P(setq WALLTHK (getreal "Enter wall thickness: ")) ^P  
^C^C_INSERT window XScale !WINWID YScale !WALLTHK
```

“window” X Y AutoLISP WINWID
WALLTHK

```
^P(setvar "gripsize"(1+ (getvar "gripsize")))(redraw)(princ)
^P(setvar "gripsize"(1- (getvar "gripsize")))(redraw)(princ)
```

GRIPSIZE 0 255

```
^P(setq a (getpoint "Enter first corner: "));\+
(setq b (getpoint "Enter opposite corner: "));\+
pline !a (list (car a)(cadr b)) !b (list (car b)(cadr a)) c;^P
```

[AutoCAD 2008](#) > .> .> .>



“”

“”

[CUI](#)

“”

“”

[CUI](#)

“”

“”

[CUI](#)

AutoCAD 2008 > .> .> .>



1. “” > “” > “”
2. “”“”“” <> ”“”“”“”



“”“1”

3.

- “1”
- “1”“”
- “1”

4. “”

- “”
- “”“”“”“”“”
- “”“”“”“”“”“”“”

- “X”
- “Y”
- “”
- “”



5. “” “<>”



6. “”





1. “” “” “”
2. “”“”“”“” <> ”“” (+)
3. “”



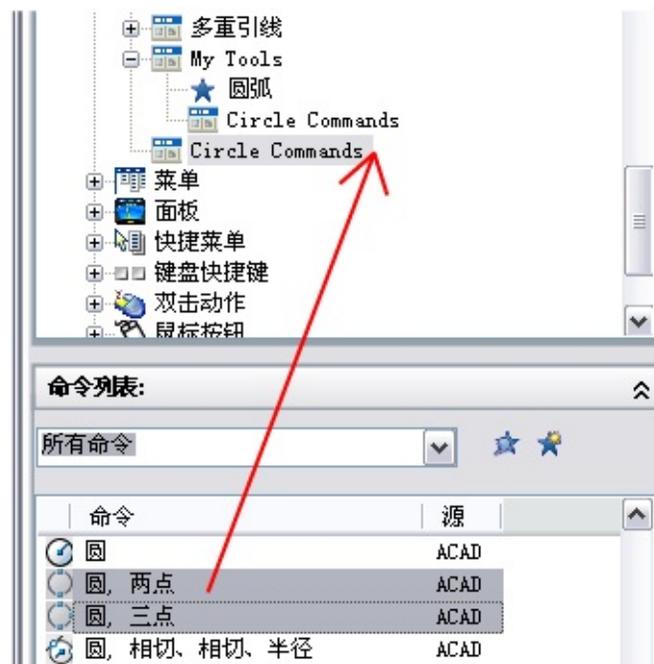
“1”



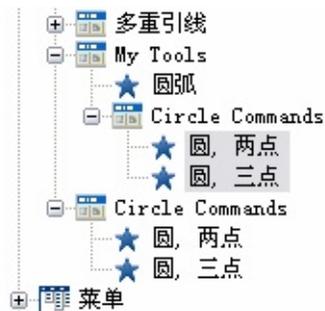
4. “1”“”



5. “<>”



6. “”







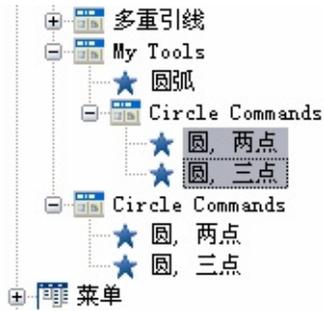
1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. “” (+)
4. “”



- 5.
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-



1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
- 4.

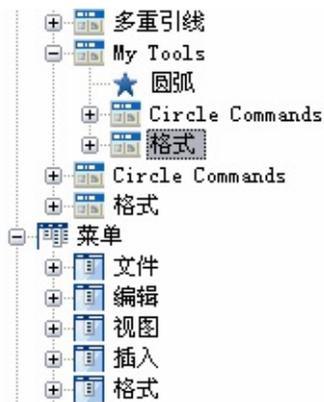


5. “”

AutoCAD 2008 > . > . > . >



1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. “” (+)
- 4.



5.

6.





“”

1. “” > “” > “”

2. “”“”“”“”“” <> ”

3. (+)



4. “”



“”

1. “” > “” > “”
2. “”“”“” <> ”“” (+)
- 3.
4. “”“”



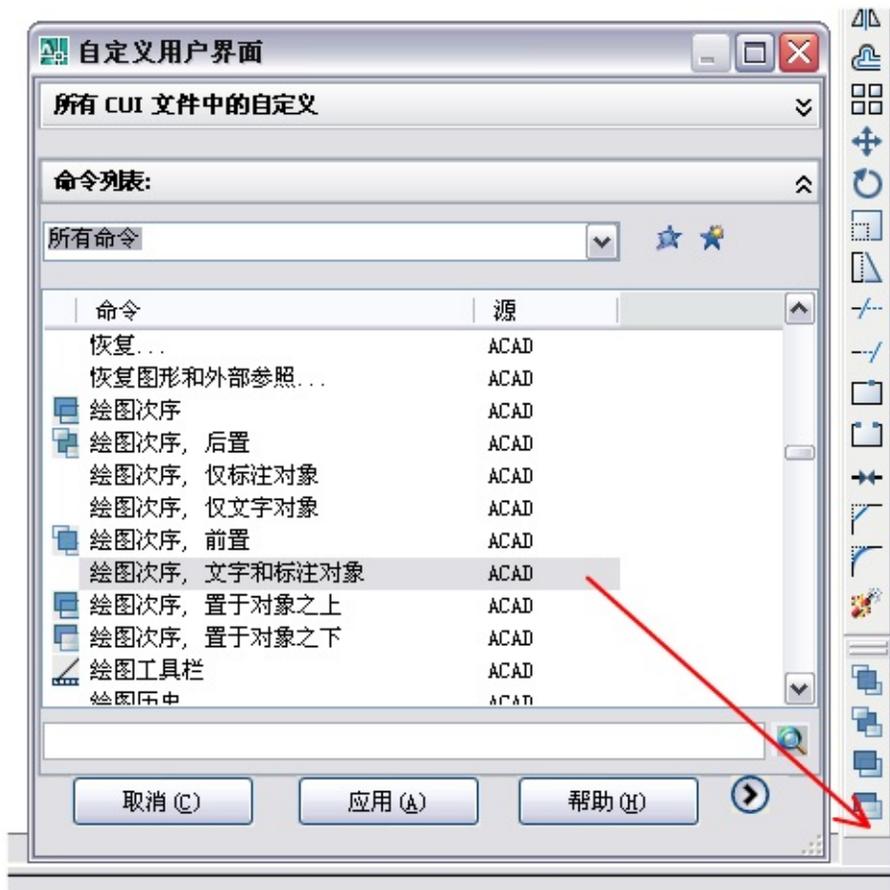
5. “”





CUI

- 1.
2. “”
3. “”“”“”



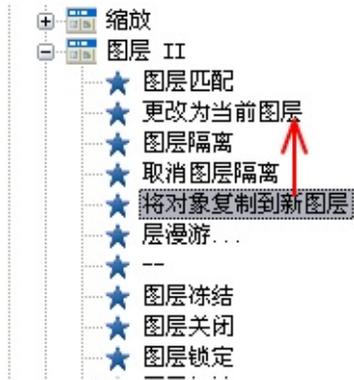
4. “”





“”

1. “” > “” > “”
2. “”“”“”“” <> ”“” (+)
3. (+)
- 4.



5. “”



AutoCAD 2008 > .> .> .>



“”

1. “” ▶ “” ▶ “”
2. “”“”“”“” <> ”“” (+)
- 3.



4. “”
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[AutoCAD 2008](#) > .> .> .>



CUI

- 1.
2. “”
- 3.



4. “”
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AutoCAD 2008 > . > . > . >



“”

1. “” “” “”
2. “”“”“” <> ”“” (+)
3. (+)
4. “”



5. “”
-
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AutoCAD 2008 > .> .> .> .>



“”

1. “” > “” > “”

2. “”“”“”“” <> ”“” (+)

3.



4. “”



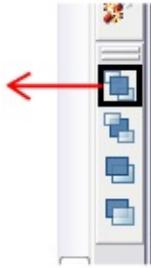
CUI

1.

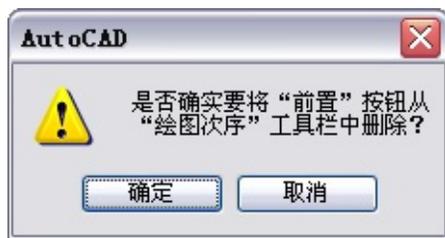
2. “”

“”

3.



4. “”



5. “”“”

[AutoCAD 2008](#) > .> .> .>



1. “” > “” > “”
 2. “”“”“”“” <> ”
 CUI
 3. “”
 4. “”
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1. “” > “” > “”
2. “”“”“” <> ”“” (+)
- 3.
4. “”“”“”“”“”

命令	
名称	绘图次序, 后置
说明	强制使选定对象显示在所有对象之后
宏	^C^C^P(ai_draworder “_b”) ^P
高级	
元素 ID	ID_DrawordeB
图像	
小图像	RCDATA_16_SN2BCK
大图像	RCDATA_16_SN2BCK

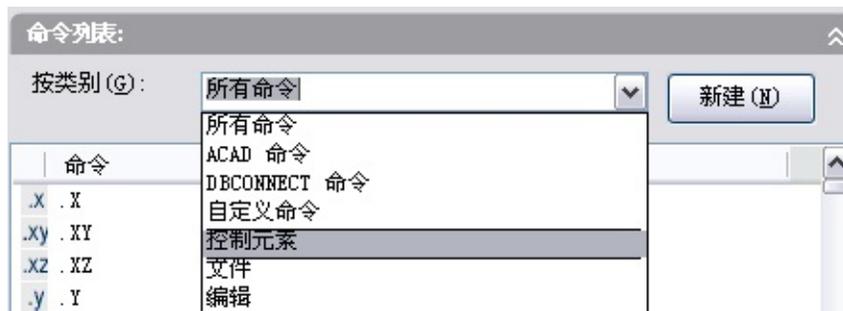
5. “”





“”

1. “” > “” > “”
2. “”“”“” <> ” (+)
3. “”“”“”“”



“”

4. “”“” <> ”

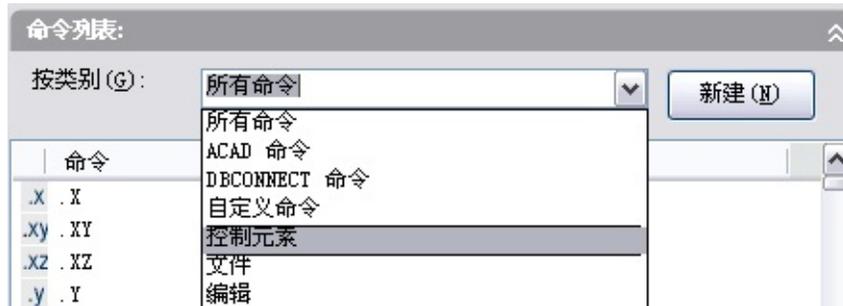


5. “”



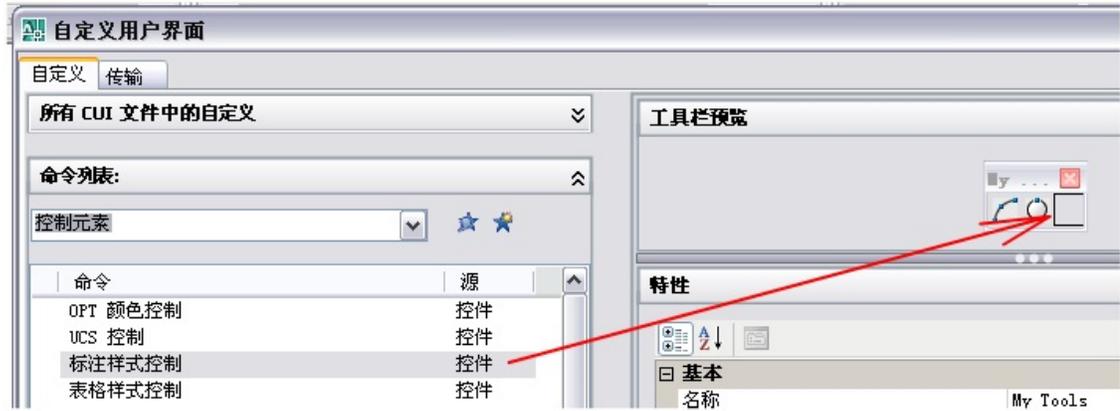
“”

1. “” > “” > “”
2. “”“”“” <> ”“” (+)
- 3.
4. “”“”“”



“”

5. “”“”



6. “”



1. “” > “” > “”
2. “”“”“” <> ” (+)
- 3.



4. “”“”



5.

6. “”



[AutoCAD 2008](#) > . > . >



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“”“”

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	CUI “		
	”“”		
	CUI “		
	”“”“”“		
	”		
X	0		0
Y	0		0
			1
	“ .. ”“”		TB_STANDARD, Standard
	CUI		
ID			ID_TbStandard

CUI “”“”“ X ”“ Y ”“”“

“”“”

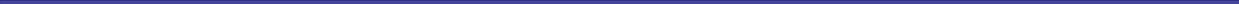
“”“”		
“”		
“”“”		

		TB_ZOOM
	“”	
	16 × 16 ID (-) () “ ” ...	RCDATA_16_ZOOM
	32 × 32 ID 32 × 32 (-) () “ ” ...	RCDATA_16_ZOOM

“”

“ < > ”

“” CUI



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- “”
- “”
- CUI
- “”
- “”
- CUI
- “”

- “”
- CUI
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- .



UCS	UCS

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- “”
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[AutoCAD 2008](#) > .> .> .>



“”



“”



[AutoCAD 2008](#) > .> .> .>





1. “” “” “”

2. “”“”“”“” <> ”“”“”“”



“”“1”

3.

- “1”
- “1”“”
- “1”

4. “”

- “”
- “” POP12 11
- DIESEL DIESEL “”

<div style="background-color: #d3d3d3; padding: 2px;"> ▣ 基本 </div>	
名称	My Tools
说明	
<div style="background-color: #d3d3d3; padding: 2px;"> ▣ 高级 </div>	
别名	POP12
元素 ID	PMU_0001

5. “”“ <> ”



ALT “”“”“”

6. “”





1. “” > “” > “”
2. “”“”“” <> ”
3. “”“” <> ”



ALT “”“”“”“”

4. “”





1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
- 4.
5. “”“”“”“”“”

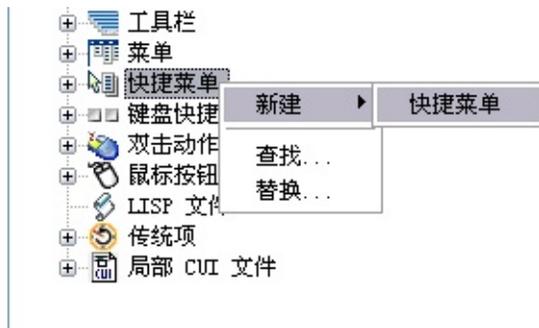
命令	
名称	圆弧
说明	用三点创建圆弧: ARC
宏	^C^C_arc
高级	
元素 ID	MM_1607
图像	
小图像	RCDATA_16_ARC3PT
大图像	RCDATA_16_ARC3PT

6. “”

AutoCAD 2008 > . > . > . >



1. “” > “” > “”
2. “”“”“”“” <> ”“”“”“”



“”“1”

3.
 - “1”
 - “1”“”
 - “1”
4. “”
 - “”
 - “”“...” ENTER “”
ENTER POP

基本	
名称	My Tools
说明	
高级	
别名	POP522
元素 ID	PMU_0001

5. “” “<>”



6.

7. “”





1. “” “” “”
2. “”“”“”“” <> ”“”“”“”



“”“1”

3.
 - “1”
 - “1”“”
 - “1”
4. “”
 - “”
 - “”“...” ENTER “”
ENTER POP
COMMAND_ *commandname* LINE
COMMAND_LINE CMCOMMAND

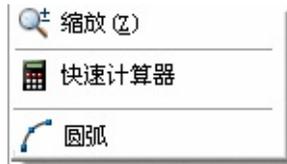
基本	
名称	Line Commands Menu
说明	
高级	
别名	POP522, COMMAND_LINE ...
元素 ID	PMU_0003

5. “” “<>”



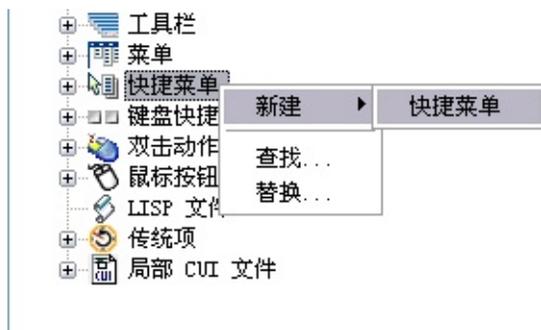
6.

7. “”





1. “” > “” > “”
2. “”“”“”“” <> ”“”“”“”



“”“1”

3.
 - “1”
 - “1”“”
 - “1”
4. “”
 - “”
 - “”“...” ENTER “”

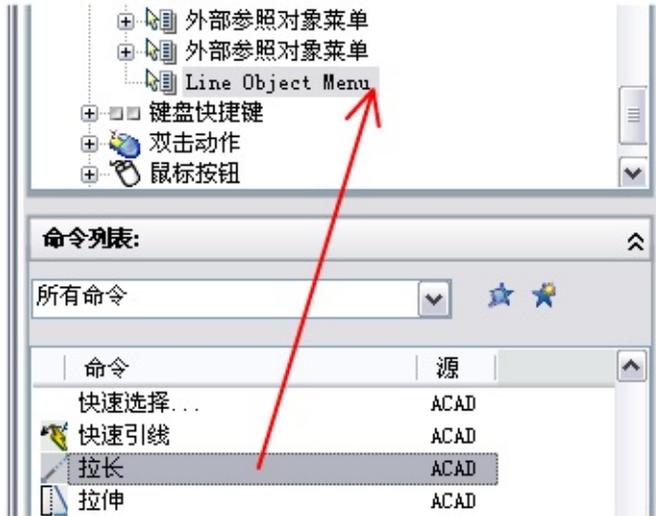
ENTER POP

OBJECT_ *objecttype* OBJECTS_ *objecttype* LINE
OBJECT_LINE CMEDIT

OBJECTS_ *objecttype*

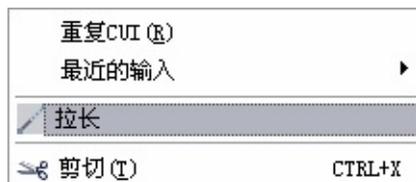
基本	
名称	Line Object Menu
说明	
高级	
别名	POP522, OBJECT_LINE
元素 ID	PMU_0003

5. “” “<>”



6.

7. “”





1. “” “” “”
2. “”“”“” <> ”“” (+)



3. “”
“”“1”
4.
 - “1”
 - “1”“”
 - “1”
5. “”
 - “”

基本	
名称	Circle Commands
说明	
高级	
元素 ID	PMU_0002

6. “” “<>”



7.

8. “”



[AutoCAD 2008](#) > . > . >



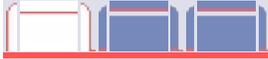
“”“”

“”

-
-
-

<\$npage>

[AutoCAD 2008](#) > .> .>



“”“”“”“”

POP501, CMDEFAULT

“” POP0 POP500 POP999

GRIPS	“”
CMDEFAULT	“”
CMEDIT	“”
CMCOMMAND	“” CMCOMMAND
SNAP	“” SHIFT

CMEDIT CMCOMMAND CMEDIT
OBJECT_ *objectname*

OBJECTS_ *objectname*

OBJECT_ *objectname* OBJECTS_ *objectname*
OBJECT_ *objectname* OBJECTS_ *objectname*

(DXF TM)

BLOCKREF	
ATTBLOCKREF	
DYNBLOCKREF	
ATTDYNBLOCKREF	
XREF	

“”“”“”

“”	
“”	
CUI	“”
“ ... ”“”	POP512,OBJECTS_BLOCKREF

CUI

ID

PM_0021

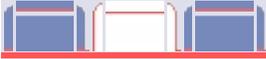
CMEDIT CMCOMMAND COMMAND_ *commandname*
CMCOMMAND *commandname* AutoCAD

-INSERT COMMAND_-INSERT

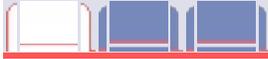
- .
- .
- .

<\$nepage>

[AutoCAD 2008](#) > .> .> .>



AutoCAD 2008 > .> .>



“”

\$ (\$ (DIESEL	
~		
! .		
&		S&le Sample <i>a</i>
\t		“Help\tF1”“Help” “F1”

■

[AutoCAD 2008](#) > .> .>



ID

ID AutoLISP **menucmd** ID

```
(menucmd "Gmenugroup.element_id=value")
```

sample ID_Line

```
(menucmd "Gsample.ID_Line=~")
```

CUI CUI CUI

$\$Pn=xxx$

```
 $\$Pn.i=xxx$ 
```

```
$ Pn 0 16      i    xxx
```

$\$Pn=xxx$ POP7 1

```
 $\$P7.1=!.$ 
```

AutoLISP **menucmd** CUI

```
(menucmd "P1.2=~")
```

CUILOAD

POP1

\$P@.@=xxx

\$P@.n=xxx

n

AutoLISP

AutoLISP **menucmd** \$Pn=xxx \$ xxx

Pn.i=?

~ !. ""

Pn.i=#?

Pn.i=? Pn.i= @

POP6 **menucmd**

```
(menucmd "P6.5=?") "~"  
(menucmd "P6.5=#?") "P6.5=~"
```

[AutoCAD 2008](#) > .> .>



“”

\$

P1 P16 \$Pn= \$Pn=* POPn

MYMENU BudsMenu P3

\$P3=MyMenu.BudsMenu

AutoLISP **menucmd**

(menucmd "P3=MyMenu.BudsMenu")

\$Pn=* POPn

Microsoft ®

-
-
-
-
-

`$section=menugroup.menuname`

section

B1-4A1-4P0-16T1-4

menugroup

CUI

menuname

AutoLISP **menucmd** (+)

`(menucmd "Gmenugroup1.menuname1=+menugroup2.menuname2")`

Pn= P5 **menucmd**

`(menucmd "P5=+mymenu.new3")`

P6

- P5 P4
- [CUILOAD](#)

`(menucmd "Gmenugroup.menuname=-")`

"MyMenu" NEW3

`(menucmd "Gmymenu.new3=-")`

Pn= P4

`$P4=-`

Pn **menucmd** \$Pn

CUI

CUI [-TOOLBAR](#) “ [(A)]:”

menugroup.subsection-name

menugroup.menuname -TOOLBAR

CUI

-
-



[AutoCAD 2008](#) > .> .> .>



“”

“”

“”

“”

“”

“”



1. “” ▶ “” ▶ “”
2. “”“”“”“” <> ”“”“”“”
“”“1”

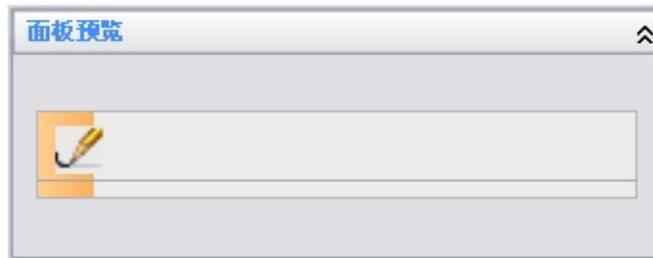


3.
 - “1”
 - “1”“”
 - “1”
4. “”
 - “”
 - “”

基本	
名称	My Tools
说明	
高级	
别名	面板1
元素 ID	PNLU_0001
图像	
小图像	
大图像	

5.

- “”/“”
- “”



6. “”





1. “” > “” > “”
2. “”“”“” <> ”“” (+)
- 3.
4. “”



“”

5. “”



AutoCAD 2008 > . > . > . >



1. “” > “” > “”
2. “”“”“” <> ”“” (+)
- 3.
4. “”



5. “”





1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. “ <> ” (+)
4. “ <> ” (+)
- 5.



6. “”
-
-



1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
- 4.
5. “”



6. “”



AutoCAD 2008 > . > . > . >



1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
4. <>



5. “”
-
-



“”

1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
4. (+)
5. “”

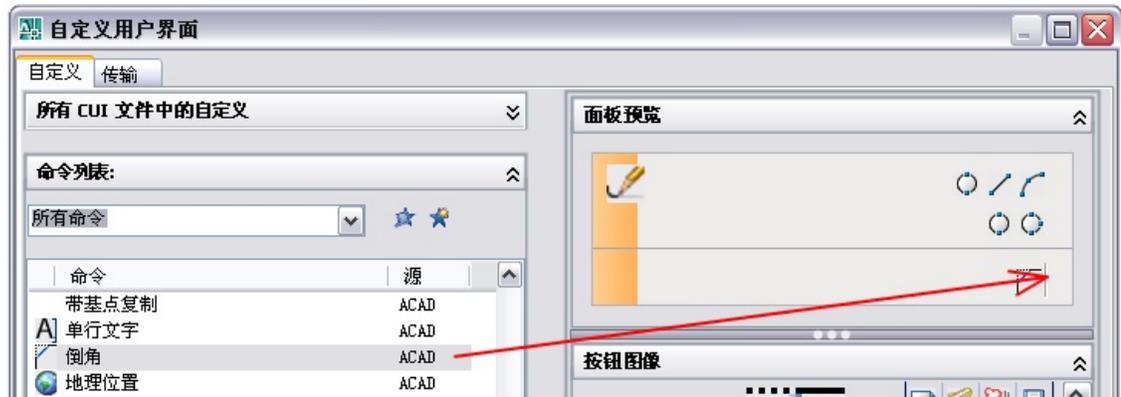


6. “”



“”

1. “” > “” > “”
2. “”“”“” <> ”“” (+)
- 3.
4. “”“”

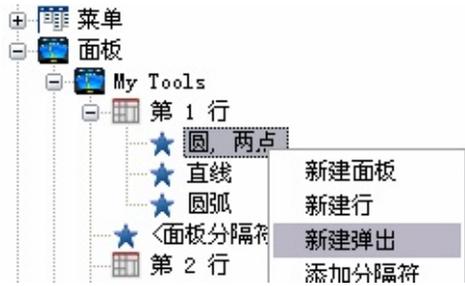


5. “”

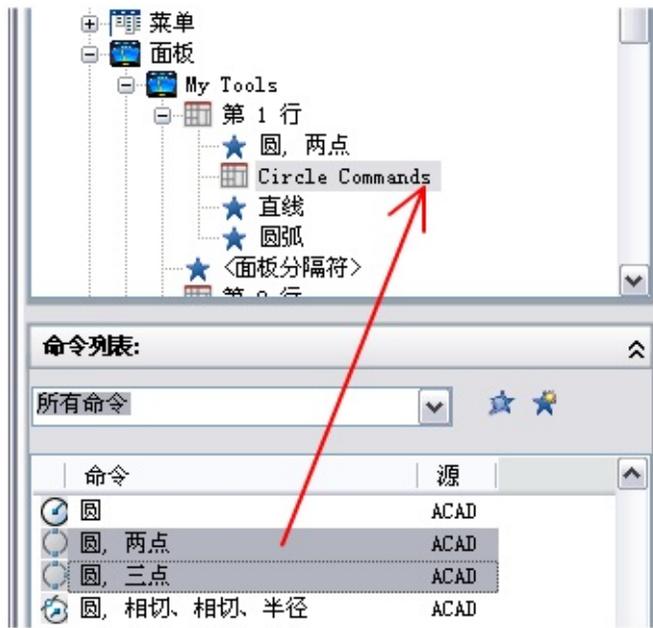
AutoCAD 2008 > . > . > . >



1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
4. “”
“ 1”
5. 1 “”



6. “”“” <> ”

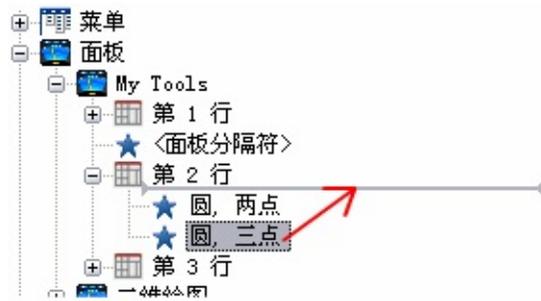


7. “”



“”

1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
4. (+)
- 5.

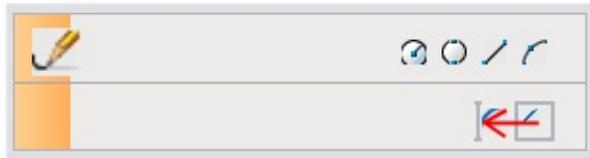


6. “”
-
-



“”

1. “” > “” > “”
2. “”“”“”“” <> ”“” (+)
- 3.
4. “”



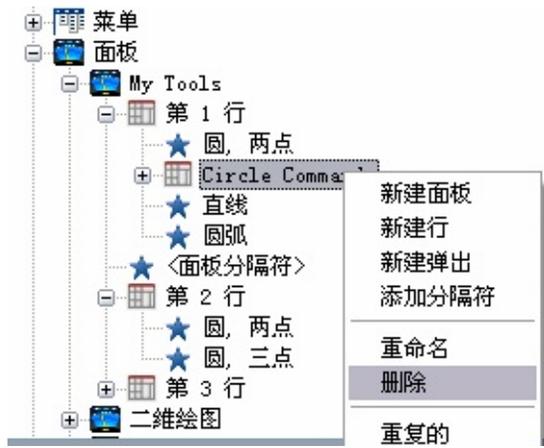
5. “”





“”

1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
4. (+)
- 5.
6. “”



7. “”





“”

1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
- 4.



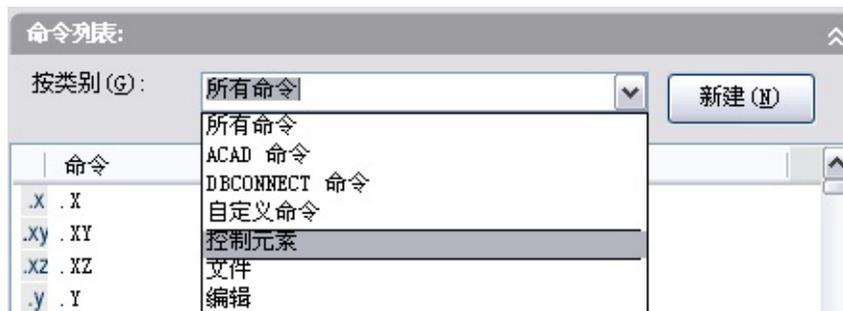
5. “”



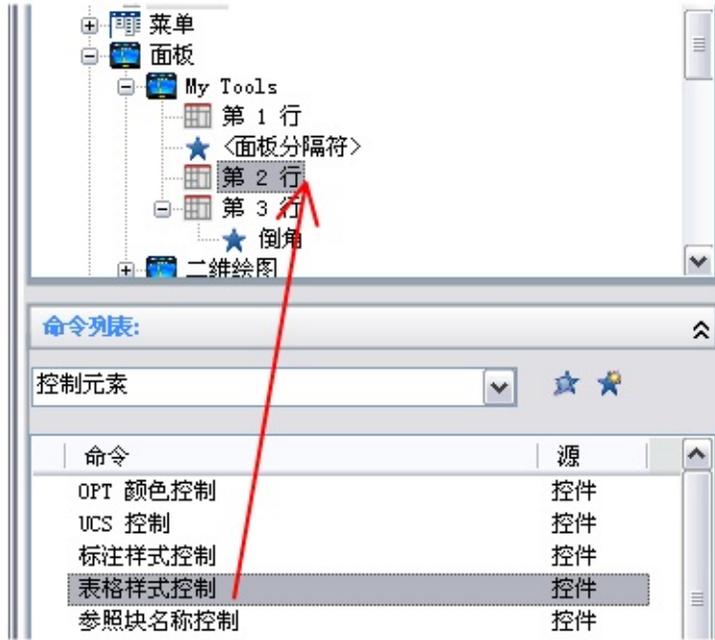


“”

1. “” > “” > “”
2. “”“”“” <> “”“” (+)
3. (+)
4. (+)
5. “”“”“”
“”



6. “”



7. “”

AutoCAD 2008 > . > . > . >

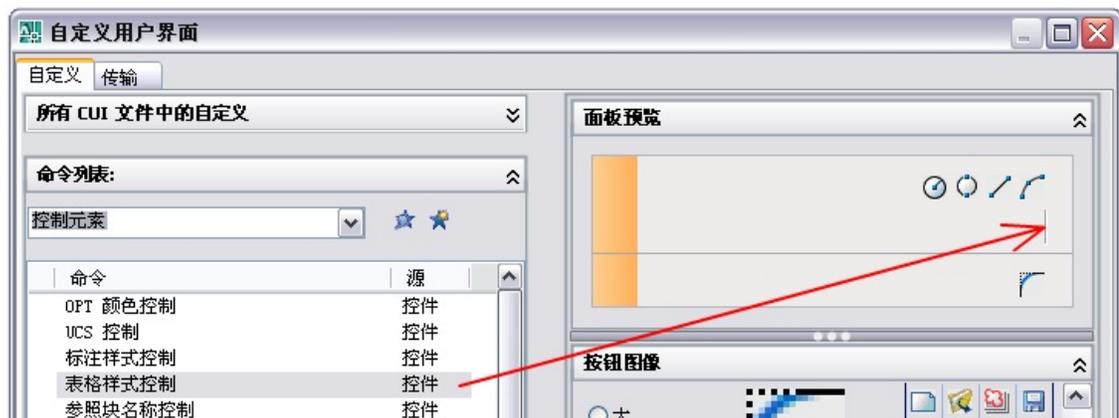


“”

1. “” > “” > “”
2. “”“”“” <> “”“” (+)
- 3.
4. “”“”“”
“”



5. “”“”



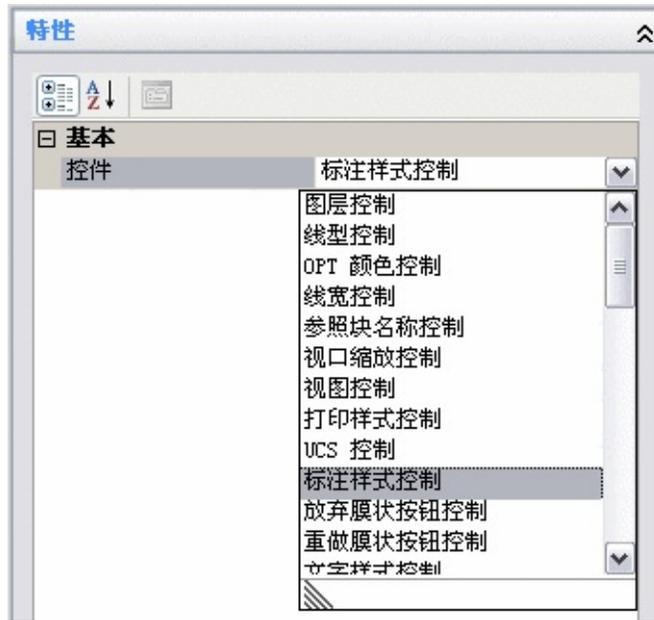
6. “”



1. “” > “” > “”
2. “”“”“” <> ”“” (+)
3. (+)
4. (+)
- 5.



6. “”“”



7.

8. “”

[AutoCAD 2008](#) > .> .>



AutoCAD

“”

<> “”

“”“”

“”

“”

“”“”

	“ .. ”“” CUI	2D_Draw
ID		PNL_0001
	16 × 16 ID (-) () “ .. ”“”	RCDATA_16_DASH _2D_MAKE_MODIFY
	32 × 32 ID 32 × 32 (-) () “ .. ”“”	RCDATA_16_DASH _2D_MAKE_MODIFY

“”

“” 1 “”

“” 1		
“”		
		“”
S	<>	2
	“ .. ”“” CUI	TPL_0001
ID		TPL_0001

“” 1 “”

“” 1		
“”		
	“”“”	
	16 × 16 ID (-) () “ ”“” ...	RCDATA_16_BLOCK
	32 × 32 ID 32 × 32 (-) () “ ”“” ...	RCDATA_16_BLOCK

<>“”“”“”

“ <> ”“”“”

-
-
-
-

- .
- .
- “”

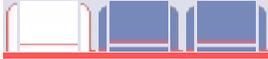
- “”

- .
- “”

- “”

- “”

- “”



“”“”

“” “”“”

1	
2	
	3DWALK 3DFLY
	3DWALK 3DFLY
1	

2

3

4

5



■ “”

■ “”

■ .

[AutoCAD 2008](#) > .> .> .>



“”

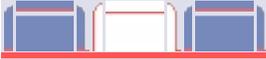


“”



<\$npage>,

[AutoCAD 2008](#) > .> .>



[AutoCAD 2008](#) > . > . >





1. “” > “” > “”
2. “”“”“” (+)
- 3.



“”

4. “” DXF

基本	
名称	标注
说明	
高级	
对象名称	DIMENSION
元素 ID	DC_0021

5. “”“” <> ”



6. “”””



1. “” > “” > “”
2. “”“”
3. “ <> ”“” (+)
4. “”



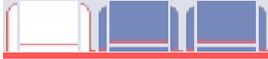
“ *n* : <> ”

5. “”“ <> ”



6. “”

[AutoCAD 2008](#) > .> .>



(\)“”“”

line
line \

[LINE](#) “” LINE “”“”

-
- .
 - .
-
-

[AutoCAD 2008](#) > .> .> .>





1. “” > “” > “”
 2. “”“”“”“” <> ”“” (+)
 3. “” (+)
 4. (+)
 - 5.
 6. “”
 - 7.
 8. “”
-
-



1. “” > “” > “”
 2. “”“”“”“” <> ”“” (+)
 3. “” (+)
 4. (+)
 5. “”
 6. “”
-
-

[AutoCAD 2008](#) > .> .> .>



1. “” ➤ “”
 2. “”“”“”“”
 3. “”
-
-

[AutoCAD 2008](#) > .> .> .>



1. **menuctl**

2.

▪ **1**

▪ **0**





1. “” > “” > “”
 2. “”“”“”“” <> ”“” (+)
 3. “” (+)
 4. “”
 5. “”
-
-



1. “” > “” > “”
 2. “”“”“”“” <> ”“” (+)
 3. “”“”“”“”
 “”“1”
 4.
 - “1”
 - “1”“”
 - “1”
 5. “”
 - “”
 - “”
 - “”
 - “”
 6. “”“” <> ”
 7. “”
-
-

[AutoCAD 2008](#) > .> .> .>



1. AutoCAD
 2. “” ▶ “” ▶ “”
 3. **mslide**
 4. “”
 5. “”
-
-

[AutoCAD 2008](#) > .> .> .>



1. **vslide**
2. “”
3. “”
“”



[AutoCAD 2008](#) > .> .> .>



- 1.
 2. “” (Windows) ▶ “”
 3. “” **cmd**
 4. “” DOS
 5. **CD <>**
 CD “c:\slides”
 6. **dir *.sld /b > <>**
 dir *.sld /b > “myslides”
 7. **<AutoCAD >\slidelib.exe <> < <>**
 “C:\Program Files\AutoCAD 2008\slidelib.exe”“myslidelib” <
 “myslides”
 8. DOS
-
-



1. “” > “” > “”
 2. “”“”“”“” <> ”“” (+)
 3. “”“”“”“”
 “”“1”
 4.
 - “1”
 - “1”“”
 - “1”
 5. “”“” <> ”
 6. “”
 - “”
 - “”
 - “”“”
 - “”“”
 7. “”
-
-



“”“ 1”“ 4”

TABLET “Cfg”

“” 32,766

“”“” 225 A I 1 25“”

“”

1		
“”		
	“ .. ”“” CUI	TABLET1, TABLET1STD
		9
		25

- .
- .
- .



[AutoCAD 2008](#) > . > . >



1 F

AutoCAD 2008 > . > . >



“”

“”“”MENUCTL

“”“ ””“”
...



“”		
		SCREEN
		1
		27
	“”“” “ ””“” ...	SCREEN, S

AutoCAD “”“Screen”“S”

AutoCAD 3 “” AutoCAD

“” NEW OPENQSAVE SAVEAS “”

“”“”“” 3 “” 3“”

“” 01_FILE

“” 3“”AutoCAD 1 2 AutoCAD

“” 22 “”AutoCAD 25 26

“Assist”“” 22

-
- .
 - .
 - .
 - .
 - .
-
-

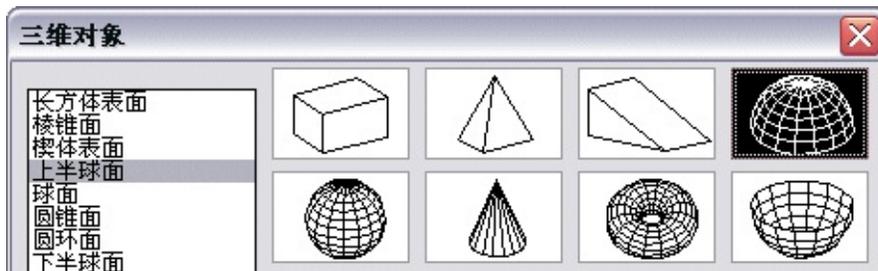
[AutoCAD 2008](#) > .> .> .>





20 20 “”“”

“”“”



“”“”“”

“”		
“”		
CUI		
“ ... ”“”		
CUI		image, image_3DObjects

“”“”“”

“”“”		
“”		
(-) ()		
		^C^C_ai_dome
ID		ID_Ai_dome
“slidelib.exe”		acad

AutoCAD

-
- [MSLIDE](#) PAN
- 3:2 3 2 3:2 3:2
-

-
- -
 -
 -
-
-

[AutoCAD 2008](#) > .> .> .>



AutoLISP



“” AutoLISP

1. “” > “” > “”

2. “”“”“” <> ”“LISP ”“ LISP”



3. “ LISP” AutoLISP LSP

LSP AutoCAD NETLOADVBALOAD
ARX

4. “”

[AutoCAD 2008](#) > . > . >



“”



“”



“”



CUI



[AutoCAD 2008](#) > [DIESEL](#) >

DIESEL



(CUI) DIESEL

AutoCAD AutoLISP ObjectARX

®

TILEMODE 0 ^P MENU ECHO

DIESEL \$section=submenu M DIESEL
AutoLISP

DIESEL AutoLISP

DIESEL

```
^C^C^P$M=$(if,$(=,$(getvar,cvport),1),mspace,pspace)
```

AutoLISP

```
^C^C^P(if(=(getvar"cvport")1)(command"mspace")+  
(command"pspace"))(princ)^P
```

TILEMODE 0 DIESEL AutoLISP

princ

^P MENU ECHO DIESEL AutoLISP

DIESEL AutoLISP **getxxx** AutoLISP

- AutoLISP
- CUI
-
- DIMSCALE 1" = 10' 120 1/4" = 1' 48

AutoLISP AutoCAD DIMSCALE

AutoLISP

```
(defun C:SYMIN ( )
  (setq sym
    (getstring
      "\nEnter symbol name: ") ; Prompts for a symbol name
    )
  (menucmd "s=symsize") ; Switches the screen menu
                        ; to the symsize submenu
  (setq
    siz (getreal
      "\nSelect symbol size: ") ; Prompts for a symbol size
    p1 (getpoint
      "\nInsertion point: ") ; Prompts for insertion point
    )
  (command "insert" ; Issues the INSERT command
    sym ; using the desired symbol
    p1 siz siz 0) ; insertion point, and size
  (menucmd "s=") ; Switches to the previous
                ; screen menu
  (princ) ; Exits quietly
)
```

AutoLISP

DIESEL DIMSCALE

AutoLISP AutoLISP

getxxx

getreal

```
$M=$(*,$(getvar,dimscale),0.375)
$M=$(*,$(getvar,dimscale),0.5)
$M=$(*,$(getvar,dimscale),0.625)
```

DIESEL DIESEL

\$

BASE DIESEL

```
$(eval,"Current layer: " $(getvar,clayer))
```

Current Layer: BASE

AutoLISP USERS1-5 DIESEL

DIESEL

DIESEL USERS3 ([USERS1-5](#)) 10

```
$(eval,"Current value: " $(getvar,users3))+  
$(if, $(eq,$(getvar,users3),""), 10 spaces )^C^Cusers3
```

DIESEL

DIESEL

```
$(edtime,$(getvar,date),DDD", "D MON YYYY)^C^Ctext +  
\\ $M=$(edtime,$(getvar,date),DDD", "D MON YYYY);
```

DIESEL ERASE

```
$(if,$(getvar,cmdactive),~)ERASE
```

[AutoCAD 2008](#) > [DIESEL](#) >

DIESEL



DIESEL DIESEL

\$?	
$\$(func,??)$	<i>func</i>
$\$(func)??$	<i>func</i>
$\$(++)$	—

[AutoCAD 2008](#) > [DIESEL](#) > [__](#) >

MODEMACRO



MODEMACRO MODEMACRO AutoCAD ®
AutoCAD

AutoCAD MODEMACRO

MODEMACRO AutoCAD

MODEMACRO 4095 SETVAR

MODEMACRO MODEMACRO 255

[modemacro](#)

(.) MODEMACRO AutoCAD

[AutoCAD 2008](#) > [DIESEL](#) > [__](#) >

MODEMACRO



DIESEL

MODEMACRO MODEMACRO

modemacro

MODEMACRO . <"">: **Greg's Bank and Grill**

MODEMACRO AutoCAD MODEMACRO

AutoCAD DIESEL

\$(somefun, arg1, arg2, ...)

somefun DIESEL AutoLISP *arg1 arg2*
AutoLISP DIESEL

DIESEL [DIESEL](#)

modemacro

MODEMACRO . <"">: **Style: \$(getvar, textstyle)**

- **Style:**
- **\$(getvar,textstyle) DIESEL (**getvar**) [TEXTSTYLE](#)**

MODEMACRO

\$(getvar, varname) MODEMACRO

modemacro

MODEMACRO . <"">: **Snap: \$(getvar, snapunit)**

\$(fix,\$(*,\$(getvar,snapang),\$(/,180,3.14159)))

modemacro

**MODEMACRO . <"">: Snap: \$(rtos,\$(index,0,
\$(getvar,snapunit))),\$(rtos,\$(index,1,\$(getvar,snapunit))) \$(angtos,
\$(getvar,snapang))**

**DIESEL (\$) DIESEL LAYOUT
MODEMACRO**

modemacro

MODEMACRO . <"">: "\$\$(getvar,clayer)= """"\$(getvar,clayer)""""

\$(getvar,clayer)="LAYOUT"

[AutoCAD 2008](#) > [DIESEL](#) > [__](#) >

AutoLISP MODEMACRO



MODEMACRO AutoLISP

ASCII AutoLISP **load**

AutoLISP MODEMACRO AutoLISP AutoLISP

strcat MODEMACRO

```
(defun C:ACADMODE ( )
  (setvar "modemacro"
    (strcat
      "Layer $(substr,$(getvar,clayer),1,8)"
      "$(if,$(getvar,orthomode), Ortho)"
      "$(if,$(getvar,snapmode), Snap)"
      "$(if,$(getvar,tabmode), Tablet)"
      "$(if,$(=,$(getvar,tilemode),0),"
      "$(if,$(=,$(getvar,cvport),1), P)"
      ")")
  )
)
```

AutoLISP “ *acadmode.lsp*”

“*acad.lsp*” **S::STARTUP** MODEMACRO AutoLISP “*mode1.lsp*”

```
;;; Sample acad.lsp file that uses S::STARTUP to load the
;;; file MODE1.LSP which defines a MODEMACRO string
(defun S::STARTUP()
  (load "mode1")
  (princ)
)
;;; Additional AutoLISP files can also be defined or
;;; loaded here
```

```
;;; MODE1.LSP
;;;
(setvar "modemacro"
  (strcat
    "L:$(substr,$(getvar,clayer),1,30)"
    "$(substr, ,1,$(-,30,$(strlen,$(getvar,clayer)))) "
  ;; ^^^^^^^^^ Note the 8 spaces here
    "<.."
    "$(if,$(eq,$(getvar,dwgname),UNNAMED),UNNAMED,"
    "$(substr,$(getvar,dwgname),"
    "$(if,$(>,$(strlen,$(getvar,dwgprefix)),29),"
    "$(-,$(strlen,$(getvar,dwgprefix)),29),1"
    "),"
    "$(strlen,$(getvar,dwgname))"
    ")"
  ")")
">"
$(if,$(getvar,orthomode), 0, )"
$(if,$(getvar,snapmode), S, )"
$(if,$(getvar,tabmode), T, )"
$(if,$(and,"
  "$(=,$(getvar,tilemode),0),$(=,$(getvar,cvport),1)),P)"
)
)
```

AutoLISP DIESEL

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

+



val1val2... val9

`$(+, val1 [, val2, ..., val9])`

5 DIESEL 15

`$(+, $(getvar,thickness),10)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

-



val1 val2 val9

`$(-, val1 [, val2 , ..., val9])`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

*



val1val2... val9

`$(*, val1 [, val2, ..., val9])`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

/



val1 val2... val9

`$(/, val1 [, val2, ..., val9])`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

=



val1 val2 10

`$(=, val1, val2)`

<">

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

<



val1 *val2* 1 0

`$(< , val1, val2)`

[HPANG](#) USERR1 1 USERR1 10.0 HPANG
15.5 0

`$(<, $(getvar, hpang), $(getvar, userr1))`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

>



val1 *val2* 1 0

`$(>, val1, val2)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

!=



val1 val2 10

`$(!=, val1, val2)`

<=">

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

<=



val1 val2 10

`$(<=, val1, val2)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

>=



val1 val2 10

`$(>=, val1, val2)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

and



val1 val19

`$(and, val1 [, val2, ..., val19])`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

angtos



`$(angtos, value [, mode, precision])`

mode precision value AutoLISP mode
mode precision UNITS

0	
1	//
2	
3	
4	

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

edtime



`$(edtime, time, picture)`

`time` AutoCAD Julian **picture** `$(getvar,date)`
`picture` **`$(edtime)`** 1998 9 5
4:53:17.506

D	5	H	4
DD	05	HH	04
DDD	Sat	MM	53
DDDD	Saturday	SS	17
M	9	MSEC	506
MO	09	AM/PM	AM
MON	Sep	am/pm	am
MONTH	September	A/P	A

YY	98	a/p	a
YYYY	1998		

AM/PM AM A M
AM/PM H HH 12 (12:00-12:59 1:00-11:59) 24
(00:00-23:59)

`$(edtime, $(getvar,date),DDD", " DD MON YYYY - H:MMam/pm)`

Sat, 5 Sep 1998 - 4:53am

`time 0 $(getvar,date) $(edtime)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

eq



val1 val2 10

`$(eq, val1, val2)`

USERS1 ([USERS1-5](#)) 1 "PART12" USERS1

`$(eq, $(getvar,users1),$(getvar,clayer))`*Returns 1*

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

eval



str DIESEL

`$(eval, str)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

`fix`



value

`$(fix, value)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

getenv



varname

`$(getenv, varname)`



[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

getvar



varname

`$(getvar, varname)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

if



`$(if, expr, dotrue [, dofalse])`

`expr dotrue dofalse expr`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

index



`$(index, which, string)`

`string` `which` 0 `$(getvar)` `XY` `Z`

[USERS1-5](#)

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

nth



which

`$(nth, which, arg0 [, arg1, ..., arg7])`

which 0

nth *arg0*

`$(nth)`
`$(index)`

`$(index)`
which

`$(nth)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

or



val1 val9

`$(or, val1 [, val2, ..., val9])`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

rtos



`$(rtos, value [, mode, precision])`

mode precision value AutoLISP *mode*
precision [UNITS](#)

value mode precision mode precision [UNITS](#)

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

strlen



string

`$(strlen, string)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

substr



string *start* *length*

\$(substr, *string*, *start* [, *length*])

1 *length*

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

upper



string

`$(upper, string)`

[AutoCAD 2008](#) > [DIESEL](#) > [DIESEL](#) >

XOR



val1 val19

`$(xor, val1 [, val2, ..., val19])`



- .
- .
- VSLIDE
- .



[AutoCAD 2008](#) > . >



- .
- .
- .



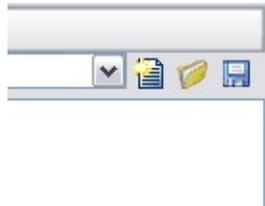


CUI

1. “” “” “”

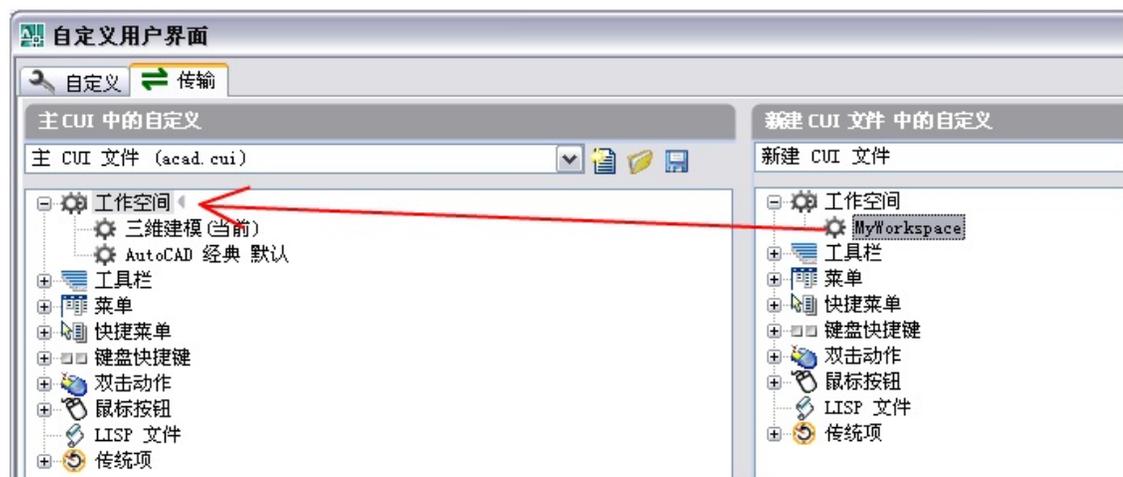
“”“” CUI

2. “”“” <> ”“”“”



3. “”

4. CUI CUI “”



5. “”



[AutoCAD 2008](#) > .> .> .>



1.

2. **mslide**

3. “”

AutoCAD . *sld*

4. “”

[AutoCAD 2008](#) > .> .> .>



1. **vslide**

2. “”“”

3. “” ➤ “”





1. Windows ASCII
entrance.sld
hall.sld
stairs.sld
study.sld
balcony.sld

2. . *txt*

3. "" (Windows) > """" > "" > ""

4. "" **CD <>**
 CD "c:\slides"

5.
slidelib libraryname < list.txt
 areas.txt slidelib house<areas.txt house.slb
SLIDELIB . *slb*



1. **filedia**
 2. **0** ENTER
 3. **vslide**
 4. **library (slidename)**
house (balcony) *house balcony*
 5. “” ▶ “”
-
-

[AutoCAD 2008](#) > .> .>



- AutoCAD ®
-
-

AutoCAD

AutoCAD

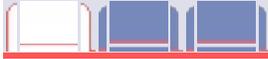
AutoCAD

[AutoCAD 2008](#) > . > . >



VSLIDE

[AutoCAD 2008](#) > .> .>



SLIDELIB

SLIDELIB SLIDELIB



[AutoCAD 2008](#) > .> .> .>





3.0 0

1. **grid on**
2. **ltscale 3.0**
3. **layer set 0 color red 0**
- 4.
5. ASCII . *scr*

```
; Turn grid on  
grid on  
; Set scale for linetypes  
ltscale 3.0  
; Set current layer and its color  
layer set 0 color red 0  
; Blank line above to end LAYER command
```

[AutoCAD 2008](#) > .> .> .>



1. "" (Windows) ▶ ""
 2. "" **acad drawing_name /b script_name**
 /t **/t template_drawing**
 /v **/v view_name**
 3. ""
 AutoCAD
-
-

[AutoCAD 2008](#) > .> .> .>



1.
 2. ASCII
 3. **script**
 4. “”“”
-
-



slide1.sld slide2.sld slide3.sld

1. **vslide slide1**
slide1
2. **vslide *slide2**
(* *slide2*)
3. **delay 2000**
2000 *slide1*
4. **vslide vslide *slide3 delay 2000**
slide2 slide3 slide2
5. **vslide delay 3000**
slide3 slide3
6. **rscript**
7. ESC **resume**

```
; Begin slide show, load SLIDE1
VSLIDE SLIDE1
; Preload SLIDE2
VSLIDE *SLIDE2
; Let audience view SLIDE1
DELAY 2000
; Display SLIDE2
```

```
VSLIDE
; Preload SLIDE3
VSLIDE *SLIDE3
; Let audience view SLIDE2
DELAY 2000
; Display SLIDE3
VSLIDE
; Let audience view SLIDE3
DELAY 3000
; Cycle
RSCRIPT
```

[AutoCAD 2008](#) > .> .>



SCRIPT

BACKGROUNDPLOT 0

ASCII Microsoft® Windows® Microsoft Word
.scr

(;)

“my house.dwg”

open "my house"

'DELAY

'GRAPHSCR

RESUME

RSCRIPT

'TEXTSCR

PICKADD PICKAUTO 1 0

U UNDO Control None
(UNDO Control All)

[AutoCAD 2008](#) > .> .>



3.0 0

setup.scr

```
grid on
ltscale 3.0
layer set 0 color red 0
```

0AutoCAD LAYER

-layer LAYER

VBA AutoLISP ® AutoCAD AutoCAD
AutoCAD“”“”“”

“”

```
ACAD drawing_name /b setup
```

"*guest house*" /v /b

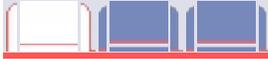
. *exe. dwg. dwt . scr* AutoCAD AutoCAD

MyTemplate.dwt “”

```
ACAD /t MyTemplate /b setup
```

“*setup.scr*” /t

[AutoCAD 2008](#) > .> .>



AutoCAD

VSLIDE VSLIDE

DELAY

ESC RESUME

UNDO Control None ""

[AutoCAD 2008](#) > .> .> .>



[AutoCAD 2008](#) > > [ActiveX Automation](#) >

ActiveX



Automation AutoCAD Automation AutoLISP

AutoCAD Automation AutoCAD AutoCAD

Automation Automation Visual Basic for Applications (VBA)

Microsoft Office VBA Automation Visual Basic.NET

Delphi AutoCAD

AutoCAD ActiveX

- AutoCAD ActiveX Automation AutoLISP C++ AutoCAD
- Windows Microsoft Excel Microsoft Word

Automation Automation AutoCAD Automation

AutoLISP Automation

Automation Automation

AutoCAD Automation (DLL) Microsoft Word

Microsoft Excel

-
- *ActiveX VBA*
 - *ActiveX and VBA Reference*
-
-

[AutoCAD 2008](#) > > [ActiveX Automation](#) >



“acad.pgp” AutoCAD

“acad.pgp” AutoCAD RUNAPP1
app1.exe“acad.pgp”

c:\vbapps

```
RUNAPP1, start c:\vbapps\app1, 0
```

```
RUNAPP2, start c:\vbapps\app2, 0, *Parameters: ,
```

RUNAPP2

AutoLISP **startapp** Automation AutoLISP
AutoLISP

[AutoCAD 2008](#) > > [ActiveX Automation](#) >



(CUI)

[AutoCAD 2008](#) > > [AutoCAD VBA](#) >

AutoCAD VBA



VBA VBA AutoCAD Microsoft Word Excel
Automation

Visual Basic 6 AutoCAD VBA

AutoCAD VBA

VBA AutoCAD ActiveX Automation AutoCAD AutoCAD VBA
Visual Basic AutoCAD ActiveX Automation AutoCAD
AutoCADActiveX Automation VBA AutoCAD

VBA AutoCAD AutoCAD Excel

AutoCAD VBA AutoCAD AutoCAD
AutoCAD VBA AutoCAD VBA AutoLISP

AutoCAD ActiveX Automation AutoCAD VBA
ActiveX Automation *ActiveX and VBA Developer's*
ActiveX Automation “” “” > “” > “”

VBA AutoCAD VBA Microsoft VBA

AutoCAD ActiveX/VBA AutoCAD API

- VBA ActiveX AutoLISP
- AutoCAD
- *Windows* ActiveX VBA *Windows*
- VBA

- Visual Basic 6AutoCAD ActiveX/VBA Visual Basic 6
AutoCAD



[AutoCAD 2008](#) > > [AutoCAD VBA](#) >

AutoCAD VBA



[VBALOAD](#) VBA “”

Microsoft VBA AutoCAD . *dvb* AutoCAD
VBA AutoLISP ObjectARX VBA VBA AutoCAD
AutoCAD

AutoCAD VBA Visual Basic 6 VBP VBA (IDE)
IMPORT EXPORT VBA

[VBALOAD](#) VBA “”

[VBARUN](#) VBA

VBA “”

module.macro

“”“”

VBA

-VBARUN AutoCAD VBA

module.macro

-vbarun <*modulemacro*>

module.macro

[AutoCAD 2008](#) > > [AutoCAD VBA](#) >

VBA



AutoCAD VBA

VBA AutoCAD

[APPLLOAD](#) “”

“acvba.arx”— VBA

AutoCAD VBA VBA AutoCAD VBA

acad.rx

“acvba.arx”

“ *acad.dvb*” AcadStartup“

acad.dvb” AcadStartup VBA

acad.dvb — VBA

AutoCAD VBA

acad.dvb AutoCAD AutoCAD

acad.dvb

“ *acad.dvb*”

“*acaddoc.lsp*”

```
(defun S::STARTUP()  
  (command "_-vbarun" "updatetitleblock")  
)
```

updatetitleblock

AutoLISP Visual LISP



AutoLISP Visual LISP (VLISP) VLISP (IDE)VLISP
ActiveX VLISP AutoLISP

ObjectARX VBA (MDE) Visual LISP AutoLISP
a

```
(setq a (getvar "DWGNAME"))
```

Visual LISP *AutoLISP Developer's Guide* “” “” “”
” “” “”

AutoLISP AutoCAD AutoCAD AutoLISP
AutoCAD AutoCAD AutoLISP

Visual LISP AutoLISP

- LSP (. *lsp*) — AutoLISP ASCII
- FAS (. *fas*) — LSP
- VLX (. *vlx*) — LSP / (DCL)

AutoLISP LSPFAS VLX

AutoCAD AutoLISP Visual LISP AutoLISP

AutoLISP AutoCAD

AutoLISP **command** [PICKADD](#) [PICKAUTO](#) 1 0
AutoCAD

AutoLISP *AutoLISP Developer's Guide* AutoLISP Visual LISP
AutoLISP Reference “” “” “”

AutoLISP Developer's Guide



AutoLISP



AutoLISP ASCII AutoLISP

AutoLISP . *lsp* ASCII (;) ASCII

AutoLISP [APpload](#) AutoLISP **load** AutoLISP
AutoLISP LSP

load AutoLISP **load** **load**
AutoLISP **load** **load**

(load *filename* [*onfailure*])

filename *onfailure* AutoLISP
filename AutoLISP “ *newfile.lsp*”

: (load "newfile")

.*lsp* LSP

AutoLISP *filename*

: (load "d:/files/morelisp/newfile")

(/) (\\) AutoLISP

■

[AutoCAD 2008](#) > > [AutoLISP Visual LISP](#) > [AutoLISP](#) >

AutoLISP



AutoCAD “acad.lsp” “acaddoc.lsp” MNL “acad.lsp”
AutoCAD “acaddoc.lsp” “acad.lsp” “acaddoc.lsp”
[ACADLSPASDOC](#)

S::STARTUP [S::STARTUP](#) **S::STARTUP**
[APPLOAD](#) “”

AutoCAD acad.lsp acaddoc.lsp

load command AutoLISP **autoload** “acaddoc.lsp”
“ cmds.lsp” CMD1 CMD2 CMD3 “ newcmd.lsp”
NEWCMD

```
(autoload "CMDS" '("CMD1" "CMD2" "CMD3"))  
(autoload "NEWCMD" '("NEWCMD"))
```

AutoLISP AutoLISP ObjectARX **autoarxload**
AutoLISP Reference **autoload** **autoarxload** “” “” >
“” > “”

AutoLISP LSP

- [AutoLISP](#)
- [S::STARTUP](#)

ACAD.LSP



AutoLISP “acad.lsp” AutoCAD “acad.lsp” “acad.lsp”

AutoCAD acad.lsp “acad.lsp” “acad.lsp” acad.lsp
“acaddoc.lsp”

[ACADLSPASDOC](#) “acad.lsp” “acaddoc.lsp” ACADLSPASDOC
0 “acad.lsp” ACADLSPASDOC 1 “acad.lsp”

acad.lsp AutoLISP **load** “acad.lsp”
“ mysessionapp1.lsp”“ databasesynch.lsp”“ drawingmanager.lsp”
AutoCAD

```
(load "mysessionapp1")  
(load "databasesynch")  
(load "drawingmanager")
```

“acad2008.lsp”Autodesk acad2008.lsp AutoCAD
AutoLISP “acad.lsp”

- .
- [AutoLISP](#)

[AutoCAD 2008](#) > > [AutoLISP Visual LISP](#) > [AutoLISP](#) >

ACADDOC.LSP



acaddoc.lsp AutoLISP

AutoCAD “*acaddoc.lsp*” [ACADLSPASDOC](#)*acaddoc.lsp*

AutoLISP “*acaddoc.lsp*” AutoCAD “*acaddoc.lsp*”
“*acaddoc.lsp*” AutoLISP

acaddoc.lsp AutoLISP **load** “*acaddoc.lsp*”
“ *mydocumentapp1.lsp*” “ *build.lsp*” “ *counter.lsp*”

```
(load "mydocumentapp1")  
(load "build")  
(load "counter")
```

acad2008doc.lsp Autodesk *acad2008doc.lsp* AutoCAD
AutoLISP “*acaddoc.lsp*”

-
- .
 - [AutoLISP](#)
-
-

[AutoCAD 2008](#) > > [AutoLISP Visual LISP](#) > [AutoLISP](#) >

AutoLISP MNL



AutoCAD MNL AutoCAD AutoLISP

AutoCAD AutoLISP AutoCAD “acad.cui”“acad.mnl”
AutoLISP MNL “acaddoc.lsp”

AutoLISP **command** (command "menu" "newmenu")
AutoLISP MNL

princ **princ**

...

princ AutoLISP **princ** **load**
onfailure

[AutoCAD 2008](#) > > [AutoLISP Visual LISP](#) > [AutoLISP](#) >

AutoLISP



AutoLISP

AutoCAD **load** *onfailure* *onfailure*

```
(princ (load "mydocapp1" "\nMYDOCAPP1.LSP file not loaded."))  
(princ (load "build" "\nBUILD.LSP file not loaded."))  
(princ (load "counter" "\nCOUNTER.LSP file not loaded."))  
(princ)
```

load *onfailure* **load** **princ**

AutoCAD *mydocapp1.lsp* **princ** AutoCAD

“MYDOCAPP1.LSP”

“*acad.lsp*” “*acaddoc.lsp*” MNL **command** **defun**

S::STARTUP

-
- [S::STARTUP](#)
-
-

[AutoCAD 2008](#) > > [AutoLISP Visual LISP](#) > [AutoLISP](#) >

S::STARTUP



S::STARTUP

LISP "acad.lsp" "acaddoc.lsp" MNL **command**

S::STARTUP "acad.lsp" "acaddoc.lsp" MNL LISP

S::STARTUP

[BHATCH](#) [HATCH](#) "acaddoc.lsp"

```
(defun C:HATCH ( )
  (alert "Using the BHATCH command!")
  (princ "\nEnter OLDHATCH to get to real HATCH command.\n")
  (command "BHATCH")
  (princ)
)
(defun C:OLDHATCH ( )
  (command ".HATCH")
  (princ)
)
(defun-q S::STARTUP ( )
  (command "undefine" "hatch")
  (princ "\nRedefined HATCH to BHATCH!\n")
)
```

defun HATCH OLDHATCH **S::STARTUP**
HATCH

S::STARTUP **defun-q** **defun**

S::STARTUP "acad.lsp" "acaddoc.lsp" MNL AutoLISP
S::STARTUP

```
(defun-q MYSTARTUP ( )
```

... your startup function ...

```
)  
(setq S::STARTUP (append S::STARTUP MYSTARTUP))
```

S::STARTUP S::STARTUP S::STARTUP

[AutoCAD 2008](#) > . > [ObjectARX](#) >

ObjectARX



ObjectARX® AutoCAD AutoCAD ObjectARX (DLL)

AutoCAD AutoCAD AutoCAD AutoCAD

AutoCAD AutoCAD DLL AutoCAD

ObjectARX AutoCAD AutoLISP VBA API

ObjectARX Developer's Guide ObjectARX ObjectARX

Autodesk “” “” “” “” “ObjectARX”

[AutoCAD 2008](#) > > [ObjectARX](#) >

ObjectARX



ObjectARX [ARX](#) “”

ObjectARX ARX “”

AutoLISP **arxload** ObjectARX **arxload** AutoLISP
load **arxload** ObjectARX **arxload**

```
(arxload filename [onfailure])
```

```
arxload filename onfailure load filename  
ObjectARX onfailure ObjectARX ObjectARX  
“myapp.arx”
```

```
(arxload "myapp")
```

AutoLISP AutoCAD

(/) (\\) AutoLISP

arxload arx

AutoLISP **arxunload** “myapp”

```
(arxunload "myapp")
```

arxunload

-



[AutoCAD 2008](#) > > [ObjectARX](#) >

ObjectARX



ObjectARX *acad.rx* AutoCAD ObjectARX

ASCII ObjectARX [APPLOAD](#) “”

AutoCAD “*acad.rx*” “*acad.rx*” ObjectARX
AcadJobs/3d_dwgs “*acad.rx*”

myapp1
otherapp

“*acad.rx*” “*AcadJobs/3d_dwgs*” AutoCAD ObjectARX AutoCAD
“*acad.rx*” AutoCAD “*acad.rx*” AutoCAD “*acad.rx*”

arxload MNL ObjectARX ObjectARX

ObjectARX AutoCAD *AutoLISP Reference* [AutoLISP](#)
autoarxload “” “” > “” > “”

-
- [AutoLISP](#)
-
-

[AutoCAD 2008](#) > > [.NET](#) >

.NET



[.NET Framework](#) [Microsoft Framework](#) [Windows](#) [Web](#)

[AutoCAD](#) [ObjectARX](#) [.NET](#) *ObjectARX Developer's Guide*
“[AutoCAD Managed Class Reference](#)”“[ObjectARX Managed Wrapper](#)
[Classes](#)”“[ObjectARX SDK](#)” [.NET Framework](#) [Microsoft](#)

[ObjectARX SDK](#) [.NET Framework](#) [VB](#) [.NET](#) [C#](#)
[\(DWG\)](#) [AutoCAD](#) [AutoCAD](#)

[AutoCAD 2008](#) > > [.NET](#) >

AutoCAD



AutoCAD NETLOAD DLL AutoCAD

[AutoCAD 2008](#) > .>



LOAD SHAPE AutoCAD SHP

AutoCAD

/

. *shp* ASCII ASCII (SHP) (SHX)

SHX STYLE TEXT MTEXT LOAD

SHAPE INSERT

PostScript

AutoCAD Type 1 PostScript AutoCAD COMPILE
SHP PFB SHX PostScript

AutoCAD Type 1 AutoCAD PostScript Adobe
PostScript SHX SHX AutoCAD

Adobe Type 1 *Adobe Type1 Font Format Version 1.1*
AutoCAD

Postscript SHX

AutoCAD (SHX) (SHP) ASCII

- .
AutoCAD (SHX) (SHP) ASCII
 - _____
 - .
 - .
0
 - _____
AutoCAD
 - .
ASCII AutoCAD
 - [Unicode](#)
Unicode Unicode Unicode AutoCAD
 - [SHX](#)
-
-

[AutoCAD 2008](#) > .> .>



- **compile**

AutoCAD “” (SHP) PostScript (PFB)
AutoCAD

“name.shx” nnn

[AutoCAD 2008](#) > .> .>



AutoCAD (SHX) (SHP) ASCII

128 AutoCAD

0

**shapenumber, defbytes, shapename
specbyte1, specbyte2, specbyte3, . . . , 0*

shapenumber

1 258 Unicode 32768 (*) Unicode
256257 258 Degree_SignPlus_Or_Minus_Sign
Diameter_Symbol Unicode U+00B0U+00B1 U+2205
“Latin Extended-A”
ASCII

defbytes

(*specbytes*) 2,000

shapename

specbyte

0

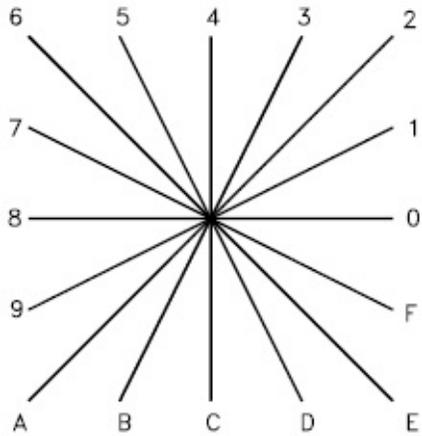


AutoCAD 2008 > .> .>



specbyte 0 AutoCAD 11

F15



X Y AutoCAD

DBOX 230

```
*230,6,DBOX
014,010,01C,018,012,0
```

“dbox.shp” COMPILE

“dbox.shx” LOAD

SHAPE

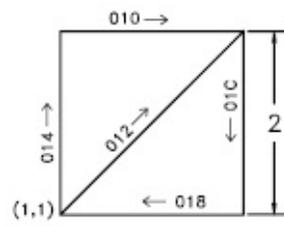
shape

? **dbox**

1,1

<> **2**

<> **0**



[AutoCAD 2008](#) > .> .> .>

012



0

1 2 1 2



[AutoCAD 2008](#) > .> .> .>

3 4



3 4 SHAPE 048 C 3 4 3 4
1 255 10 3,10 2 6 12
AutoCAD

[AutoCAD 2008](#) > .> .> .>

5 6/



5 6

nnn

nnn

[AutoCAD 2008](#) > .> .> .>

7



7 Unicode 7 1 255 Unicode 7 1
65535 Unicode Unicode Unicode Unicode
[Unicode](#)

[AutoCAD 2008](#) > .> .> .>

8 9X-Y



15 8 9

X-Y 8

X-Y 8

8, X-displacement, Y-displacement

X-Y -128 +127 + 10 3

8, (-10, 3)

9 9

X-Y (0,0)

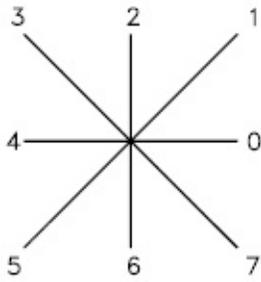
9, (3, 1), (3, 2), (2, -3), (0, 0)

(0,0) X-Y AutoCAD

00A



00A 10 45 3

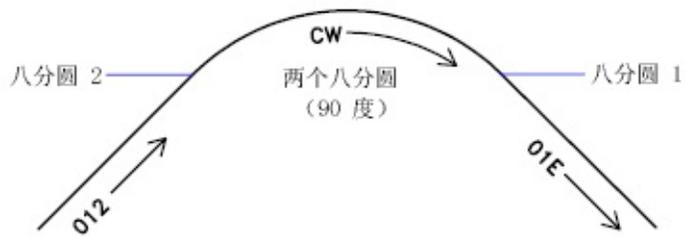


10, radius, (-)0SC

1 255 s 0 7 c 0 70

...012, 10, (1, -032), 01E, ...

3



00B



00B (11)

```
11, start_offset, end_offset, high_radius, radius, (-)0SC
```

```
start_offset  end_offset  high_radius  radius
255 0          high_radius 256  radius 255
radius 00A
```

```
45 256 45          start offset 0
```

```
end offset          end offset 0
```

```
55 95 3
```

```
11, (56, 28, 0, 3, 012)
```

```
start_offset = 56    ((55 - 45) * 256 / 45) = 56
end_offset = 28     ((95 - 90) * 256 / 45) = 28
high_radius = 0     (radius < 255)
radius = 3
starting octant = 1  45
ending octant = 2  90
```

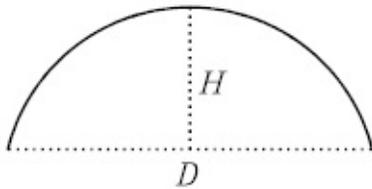
00C 00D



00C 00D12 13 8 9 8 9 X-Y 00C
00D 00C 00D (polyarcs) (0,0)
00C

0C, X-displacement, Y-displacement, Bulge

XY -127 +127 D H ((2 * H/D) * 127)



127 -127 0 8

00D 13 0 (0,0) S

13, (0, 5, 127), (0, 5, -127), (0, 0)

-128

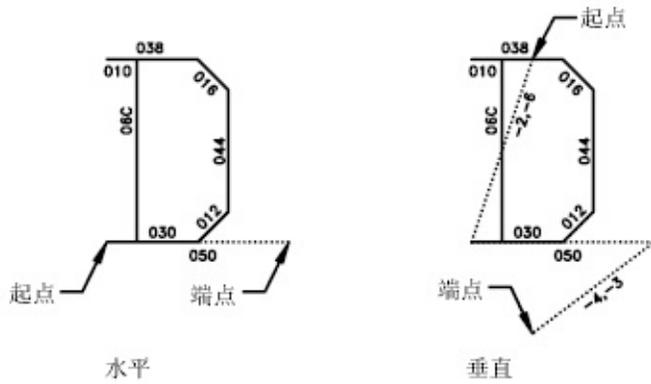
00E



00E (14)

00E (14) D

```
*68, 22, ucd  
2, 14, 8, (-2, 6), 1, 030, 012, 044, 016, 038, 2, 010, 1, 06C, 2, 050,  
14, 8, (-4, -3), 0
```



[AutoCAD 2008](#) > .> .>



0

AutoCAD STYLE

AutoCAD ASCII 1 31 AutoCAD

10 (LF)

(LF) [TEXT](#)

*10, 5, lf

2, 8, (0, -10), 0

LF

0

*0, 4, font-name
above, below, modes, 0

above below TEXT

modes 0 2 00E (14)

modes 2

AutoCAD AutoCAD

%%d (°)

%%p / (±)

%%c

[TEXT](#) %% nnn

AutoCAD ASCII

*65, 11, uca
024, 043, 04d, 02c, 2, 047, 1, 040, 2, 02e, 0

uca AutoCAD

uca A

Extended Simplex Roman



```
;;  
;; romans.shp - Extended Simplex Roman  
;;  
;; Copyright 1997 by Autodesk, Inc.  
;;  
;; Permission to use, copy, modify, and distribute this software for  
;; any purpose and without fee is hereby granted, provided that the  
;; above copyright notice appears in all copies and that the restric  
;; rights notice below appear in all supporting documentation.  
;;  
;; Use, duplication, or disclosure by the U.S. Government is subject  
;; to restrictions set forth in FAR 52.227-19 (Commercial Computer  
;; Software - Restricted Rights) and DFAR 252.227-7013(c)(1)(ii)  
;; (Rights in Technical Data and Computer Software), as applicable.  
;;  
*UNIFONT,6,ROMANS Copyright 1997 by Autodesk, Inc.  
21,7,2,0,0,0  
*0000A,9,lf  
2,8,(0,-34),14,8,(30,34),0  
*00020,9,spc  
2,8,(21,0),14,8,(-21,-30),0  
*00021,30,kexc  
2,14,8,(-5,-21),14,5,8,(5,21),1,0EC,2,05C,1,01A,01E,012,016,2,  
8,(5,-2),14,6,14,8,(5,-9),0  
*00022,41,kdblqt  
2,14,8,(-8,-25),14,5,8,(6,24),1,01A,016,012,01E,02C,02B,01A,2,  
8,(8,5),1,01A,016,012,01E,02C,02B,01A,2,8,(4,-19),14,6,  
14,8,(8,-9),0  
*00023,57,kns  
2,14,3,2,14,8,(-21,-50),14,4,2,14,5,8,(11,25),1,8,(-7,-32),2,  
8,(13,32),1,8,(-7,-32),2,8,(-6,19),1,0E0,2,8,(-15,-6),1,0E0,2,  
8,(4,-6),14,6,14,3,2,14,8,(21,-32),14,4,2,0  
*00024,67,kds  
2,14,8,(-10,-25),14,5,8,(8,25),1,8,(0,-29),2,8,(4,29),1,  
8,(0,-29),2,8,(5,22),1,026,8,(-3,1),048,8,(-3,-1),02A,02C,02D,  
01E,02F,8,(6,-2),02F,01E,02D,03C,02A,8,(-3,-1),048,8,(-3,1),026,
```

2, 8, (17, -3), 14, 6, 14, 8, (10, -13), 0
*00025, 64, kpc
2, 14, 8, (-12, -21), 14, 5, 8, (21, 21), 1, 8, (-18, -21), 2, 8, (5, 21), 1, 02E,
02C, 02B, 029, 028, 026, 024, 023, 021, 020, 02F, 8, (3, -1), 030, 8, (3, 1), 021,
2, 8, (-4, -14), 1, 029, 02B, 02C, 02E, 020, 021, 023, 024, 026, 028, 2,
8, (7, -7), 14, 6, 14, 8, (12, -9), 0
*00026, 67, kand
2, 14, 8, (-13, -21), 14, 5, 8, (23, 12), 1, 014, 016, 018, 01A, 02B, 8, (-2, -5),
8, (-2, -3), 02A, 029, 048, 027, 016, 025, 024, 023, 012, 8, (7, 4), 012, 023,
024, 025, 027, 029, 02B, 02C, 8, (1, -3), 8, (2, -3), 8, (5, -7), 02E, 02F, 020,
012, 014, 2, 8, (3, -2), 14, 6, 14, 8, (13, -9), 0
*00027, 29, kapos
2, 14, 8, (-5, -25), 14, 5, 8, (6, 24), 1, 01A, 016, 012, 01E, 02C, 02B, 01A, 2,
8, (6, -19), 14, 6, 14, 8, (5, -9), 0
*00028, 39, klp
2, 14, 8, (-7, -25), 14, 5, 8, (11, 25), 1, 02A, 8, (-2, -3), 04B, 8, (-1, -5), 04C,
8, (1, -5), 04D, 8, (2, -3), 02E, 2, 8, (3, 7), 14, 6, 14, 8, (7, -16), 0
*00029, 39, krp
2, 14, 8, (-7, -25), 14, 5, 8, (3, 25), 1, 02E, 8, (2, -3), 04D, 8, (1, -5), 04C,
8, (-1, -5), 04B, 8, (-2, -3), 02A, 2, 8, (11, 7), 14, 6, 14, 8, (7, -16), 0
*0002A, 37, kas
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02C, 02B, 8, (-2, -3), 0AA, 0E0, 2, 8, (3, 0), 14, 6, 14, 8, (10, -9),
*00033, 46, n3
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*00034, 34, n4
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*00035, 52, n5
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*00038, 66, n8
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*00040, 93, kea
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02B, 8, (-1, -3), 03C, 8, (1, -3), 02D, 02E, 02F, 8, (3, -1), 030, 8, (3, 1), 021,
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027, 016, 8, (-1, 3), 024, 2, 8, (14, -7), 14, 6, 14, 8, (8, -9), 0
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8, (1, -3), 02D, 02E, 02F, 040, 021, 022, 023, 8, (1, 3), 054, 8, (-1, 3), 025,
026, 027, 048, 2, 8, (3, -17), 1, 06E, 2, 8, (4, 2), 14, 6, 14, 8, (11, -11), 0
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8, (-3, 1), 026, 2, 8, (17, -3), 14, 6, 14, 8, (10, -9), 0
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*00059, 34, ucy
2, 14, 8, (-9, -21), 14, 5, 8, (1, 21), 1, 8, (8, -10), 0BC, 2, 8, (8, 21), 1,
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8, (-14, -21), 1, 0E0, 2, 8, (3, 0), 14, 6, 14, 8, (10, -9), 0
*0005B, 37, klb
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8, (-7, -32), 1, 070, 2, 8, (3, 7), 14, 6, 14, 8, (7, -16), 0
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2, 14, 8, (-11, -25), 14, 5, 8, (2, 25), 1, 8, (18, -32), 2, 8, (2, 7), 14, 6,
14, 8, (11, -16), 0

*0005D, 37, krb
2, 14, 8, (-7, -25), 14, 5, 8, (9, 25), 1, 8, (0, -32), 2, 8, (-7, 32), 1, 070, 2,
8, (-7, -32), 1, 070, 2, 8, (4, 7), 14, 6, 14, 8, (7, -16), 0

*0005E, 28, kcaret
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14, 6, 14, 8, (11, -9), 0

*0005F, 21, kundrl
2, 14, 8, (-12, -14), 14, 5, 02E, 1, 8, (20, 0), 2, 022, 14, 6, 14, 8, (12, -11), 0

*00060, 29, krvap
2, 14, 8, (-5, -25), 14, 5, 8, (4, 24), 1, 01E, 012, 016, 01A, 02C, 02D, 01E, 2,
8, (6, -19), 14, 6, 14, 8, (5, -9), 0

*00061, 55, lca
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027, 038, 029, 02A, 8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 2,
8, (4, -3), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0

*00062, 57, lcb
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (4, 21), 1, 8, (0, -21), 2, 0B4, 1,
022, 021, 030, 02F, 02E, 8, (1, -3), 02C, 8, (-1, -3), 02A, 029, 038, 027, 026, 2,
8, (15, -3), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0

*00063, 39, lcc
2, 14, 8, (-9, -14), 14, 5, 8, (15, 11), 1, 026, 027, 038, 029, 02A, 8, (-1, -3),
02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 2, 8, (3, -3), 14, 6, 14, 8, (9, -9), 0

*00064, 57, lcd
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (15, 21), 1, 8, (0, -21), 2, 0B4,
1, 026, 027, 038, 029, 02A, 8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022,
2, 8, (4, -3), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0

*00065, 42, lce
2, 14, 8, (-9, -14), 14, 5, 8, (3, 8), 1, 0C0, 024, 025, 016, 027, 038, 029, 02A,
8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 2, 8, (3, -3), 14, 6,
14, 8, (9, -9), 0

*00066, 36, lcf
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*00067, 66, lcg
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (15, 14), 1, 8, (0, -16),
8, (-1, -3), 01A, 029, 038, 027, 2, 8, (9, 17), 1, 026, 027, 038, 029, 02A,
8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 2, 8, (4, -3), 14, 6, 14, 3,
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*00068, 48, lch
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032, 021, 030, 02F, 8, (1, -3), 0AC, 2, 8, (4, 0), 14, 6, 14, 3, 2, 14, 8, (19, -18),
14, 4, 2, 0

*00069, 32, lci
2, 14, 8, (-4, -21), 14, 5, 8, (3, 20), 1, 01E, 012, 016, 01A, 2, 8, (1, -7), 1, 0DC,
2, 8, (4, 0), 14, 6, 14, 8, (4, -9), 0

*0006A, 39, lcj
2, 14, 8, (-5, -21), 14, 5, 8, (5, 20), 1, 01E, 012, 016, 01A, 2, 8, (1, -7), 1,
8, (0, -16), 8, (-1, -3), 029, 028, 2, 8, (9, 7), 14, 6, 14, 8, (5, -16), 0

*0006B, 49, lck
2, 14, 3, 2, 14, 8, (-17, -42), 14, 4, 2, 14, 5, 8, (4, 21), 1, 8, (0, -21), 2,

8, (10, 14), 1, 0AA, 2, 042, 1, 8, (7, -8), 2, 8, (2, 0), 14, 6, 14, 3, 2,
14, 8, (17, -18), 14, 4, 2, 0
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14, 8, (4, -9), 0
*0006D, 45, lcm
2, 14, 8, (-15, -14), 14, 5, 8, (4, 14), 1, 0EC, 2, 0A4, 1, 032, 021, 030, 02F,
8, (1, -3), 0AC, 2, 0A4, 1, 032, 021, 030, 02F, 8, (1, -3), 0AC, 2, 8, (4, 0), 14, 6,
14, 8, (15, -9), 0
*0006E, 46, lcn
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (4, 14), 1, 0EC, 2, 0A4, 1, 032,
021, 030, 02F, 8, (1, -3), 0AC, 2, 8, (4, 0), 14, 6, 14, 3, 2, 14, 8, (19, -18),
14, 4, 2, 0
*0006F, 58, lco
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (8, 14), 1, 029, 02A, 8, (-1, -3),
02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 8, (1, 3), 024, 8, (-1, 3), 026, 027,
038, 2, 8, (11, -14), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*00070, 59, lcp
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (4, 14), 1, 8, (0, -21), 2,
8, (0, 18), 1, 022, 021, 030, 02F, 02E, 8, (1, -3), 02C, 8, (-1, -3), 02A, 029,
038, 027, 026, 2, 8, (15, -3), 14, 6, 14, 3, 2, 14, 8, (19, -32), 14, 4, 2, 0
*00071, 59, lcq
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (15, 14), 1, 8, (0, -21), 2,
8, (0, 18), 1, 026, 027, 038, 029, 02A, 8, (-1, -3), 02C, 8, (1, -3), 02E, 02F,
030, 021, 022, 2, 8, (4, -3), 14, 6, 14, 3, 2, 14, 8, (19, -32), 14, 4, 2, 0
*00072, 44, lcr
2, 14, 3, 2, 14, 8, (-13, -28), 14, 4, 2, 14, 5, 8, (4, 14), 1, 0EC, 2, 084, 1,
8, (1, 3), 022, 021, 030, 2, 8, (1, -14), 14, 6, 14, 3, 2, 14, 8, (13, -18), 14, 4, 2,
0
*00073, 60, lcs
2, 14, 3, 2, 14, 8, (-17, -28), 14, 4, 2, 14, 5, 8, (14, 11), 1, 025, 8, (-3, 1), 038,
8, (-3, -1), 02B, 02D, 02F, 8, (5, -1), 02F, 02D, 01C, 02B, 8, (-3, -1), 038,
8, (-3, 1), 025, 2, 8, (14, -3), 14, 6, 14, 3, 2, 14, 8, (17, -18), 14, 4, 2, 0
*00074, 36, lct
2, 14, 8, (-6, -21), 14, 5, 8, (5, 21), 1, 8, (0, -17), 8, (1, -3), 02F, 020, 2,
8, (-8, 14), 1, 070, 2, 8, (3, -14), 14, 6, 14, 8, (6, -9), 0
*00075, 46, lcu
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (4, 14), 1, 0AC, 8, (1, -3), 02F,
030, 021, 032, 2, 0A4, 1, 0EC, 2, 8, (4, 0), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4,
2, 0
*00076, 33, lcv
2, 14, 8, (-8, -14), 14, 5, 8, (2, 14), 1, 8, (6, -14), 2, 8, (6, 14), 1,
8, (-6, -14), 2, 8, (8, 0), 14, 6, 14, 8, (8, -9), 0
*00077, 49, lcw
2, 14, 8, (-11, -14), 14, 5, 8, (3, 14), 1, 8, (4, -14), 2, 8, (4, 14), 1,
8, (-4, -14), 2, 8, (4, 14), 1, 8, (4, -14), 2, 8, (4, 14), 1, 8, (-4, -14), 2,
8, (7, 0), 14, 6, 14, 8, (11, -9), 0
*00078, 43, lcx
2, 14, 3, 2, 14, 8, (-17, -28), 14, 4, 2, 14, 5, 8, (3, 14), 1, 8, (11, -14), 2, 0E4,
1, 8, (-11, -14), 2, 8, (14, 0), 14, 6, 14, 3, 2, 14, 8, (17, -18), 14, 4, 2, 0

*00079, 37, lcy
2, 14, 8, (-8, -14), 14, 5, 8, (2, 14), 1, 8, (6, -14), 2, 8, (6, 14), 1,
8, (-6, -14), 04B, 02A, 029, 018, 2, 8, (15, 7), 14, 6, 14, 8, (8, -16), 0
*0007A, 47, lcz
2, 14, 3, 2, 14, 8, (-17, -28), 14, 4, 2, 14, 5, 8, (14, 14), 1, 8, (-11, -14), 2,
0E4, 1, 0B0, 2, 8, (-11, -14), 1, 0B0, 2, 8, (3, 0), 14, 6, 14, 3, 2,
14, 8, (17, -18), 14, 4, 2, 0
*0007B, 54, klbr
2, 14, 3, 2, 14, 8, (-13, -50), 14, 4, 2, 14, 5, 8, (9, 25), 1, 029, 01A, 02B, 02C,
02D, 01E, 02D, 02C, 02A, 029, 02F, 02E, 02C, 02B, 01A, 02B, 02C, 02D, 01E, 02F,
2, 8, (5, 7), 14, 6, 14, 3, 2, 14, 8, (13, -32), 14, 4, 2, 0
*0007C, 25, kvbar
2, 14, 8, (-4, -25), 14, 5, 8, (4, 25), 1, 8, (0, -32), 2, 8, (4, 7), 14, 6,
14, 8, (4, -16), 0
*0007D, 54, krbr
2, 14, 3, 2, 14, 8, (-15, -50), 14, 4, 2, 14, 5, 8, (5, 25), 1, 02F, 01E, 02D, 02C,
02B, 01A, 02B, 02C, 02E, 02F, 029, 02A, 02C, 02D, 01E, 02D, 02C, 02B, 01A, 029,
2, 8, (9, 7), 14, 6, 14, 3, 2, 14, 8, (15, -32), 14, 4, 2, 0
*0007E, 37, ktlde
2, 14, 8, (-13, -14), 14, 5, 8, (4, 6), 1, 024, 8, (1, 3), 021, 020, 02F, 8, (4, -3),
02F, 020, 021, 023, 024, 2, 8, (4, -12), 14, 6, 14, 8, (13, -9), 0
*00080, 4, keuroRef
7, 020AC, 0
*000A0, 9, spc
2, 8, (21, 0), 14, 8, (-21, -30), 0
*000A1, 28, kiexc
2, 14, 8, (-5, -21), 14, 5, 050, 1, 0E4, 2, 054, 1, 012, 016, 01A, 01E, 2,
8, (8, -19), 14, 6, 14, 8, (5, -9), 0
*000A2, 43, kcent
2, 14, 8, (-9, -17), 14, 5, 03E, 1, 8, (12, 20), 2, 06C, 1, 026, 027, 038, 029, 02A,
8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 2, 8, (3, -3), 14, 6,
14, 8, (9, -9), 0
*000A3, 37, kpound
2, 14, 8, (-10, -21), 14, 5, 8, (12, 18), 1, 025, 027, 029, 02B, 0FC, 03A, 0E0, 2,
8, (-8, 10), 1, 068, 014, 060, 2, 8, (9, -11), 14, 6, 14, 8, (10, -9), 0
*000A5, 44, kyen
2, 14, 8, (-12, -21), 14, 5, 8, (1, 21), 1, 8, (8, -10), 0BC, 2, 8, (8, 21), 1,
8, (-8, -10), 2, 078, 1, 0E0, 2, 8, (-14, -3), 1, 0E0, 2, 8, (6, -8), 14, 6,
14, 8, (12, -9), 0
*000A7, 78, kpar
2, 14, 8, (-10, -25), 14, 5, 060, 1, 012, 016, 01A, 01C, 02D, 01E, 02F, 020, 021,
012, 023, 014, 025, 016, 8, (-8, 4), 016, 025, 014, 023, 012, 021, 010,
8, (8, -4), 2, 094, 028, 1, 01A, 01E, 012, 014, 025, 016, 027, 028, 029, 01A, 02B,
01C, 02D, 01E, 8, (8, -4), 01E, 02D, 01C, 02B, 01A, 029, 018, 8, (-8, 4), 2,
8, (16, -9), 14, 6, 14, 8, (10, -13), 0
*000AA, 51, lcau
2, 14, 8, -7, -21, 14, 5, 8, 4, 14, 3, 2, 1, 0A0, 2, 054, 1, 02A, 029, 028, 027, 016,
8, -1, 3, 024, 8, 1, 3, 012, 021, 020, 02F, 02E, 2, 034, 1, 0CC, 2, 4, 2, 8, 4, -15,
14, 6, 14, 8, 7, -9, 0
*000AB, 25, kfrew

2,14,8,(-9,-14),14,5,0A0,1,076,072,2,050,1,07A,07E,2,030,14,6,
14,8,(9,-9),0
*000B0,25,kdeg
2,14,8,(-3,-21),14,5,8,(1,19),1,10,(2,64),2,8,(8,-19),14,6,
14,8,(3,-9),0
*000B1,39,kpls-min
2,14,8,(-13,-21),14,5,8,(13,21),1,8,(0,-18),2,096,1,8,(18,0),2,
8,(-18,-11),1,8,(18,0),2,8,(4,-1),14,6,14,8,(13,-9),0
*000B5,48,kmicro
2,14,3,2,14,8,(-19,-28),14,4,2,14,5,07C,1,022,8,(3,19),0AC,
8,(1,-3),02F,030,021,032,2,0A4,1,0EC,2,8,(4,0),14,6,14,3,2,
14,8,(19,-32),14,4,2,0
*000BA,56,lcou
2,14,8,-7,-21,14,5,8,4,14,3,2,1,0A0,2,8,-4,14,1,028,029,01A,8,-1,
-3,02C,8,1,-3,01E,02F,020,021,012,8,1,3,024,8,-1,3,016,027,2,4,2,
8,6,-21,14,6,14,8,7,-9,0
*000BB,25,kffrw
2,14,8,(-9,-14),14,5,030,1,072,076,2,050,1,07E,07A,2,0A0,14,6,
14,8,(9,-9),0
*000BC,43,kquart
2,14,8,(-14,-25),14,5,8,(4,21),1,021,022,0EC,2,8,(-2,-14),1,
8,(16,29),2,8,(2,-23),1,0A8,8,(7,9),0EC,2,8,(7,3),14,6,
14,8,(14,-13),0
*000BD,50,khalf
2,14,8,(-14,-25),14,5,8,(4,21),1,021,022,0EC,2,8,(-2,-14),1,
8,(16,29),2,8,(-6,-18),1,014,023,021,020,02F,02D,01C,02B,
8,(-7,-8),080,2,8,(4,3),14,6,14,8,(14,-13),0
*000BF,47,kiqm
2,14,8,(-9,-21),14,5,8,(13,4),1,016,012,01E,01C,02B,01A,029,038,
8,(-3,1),025,024,023,012,021,022,034,2,054,1,012,016,01A,01E,2,
8,(8,-19),14,6,14,8,(9,-9),0
*000C0,43,uc^
2,14,8,(-9,-25),14,5,8,(9,23),1,047,2,04E,1,8,(-8,-21),2,
8,(8,21),1,8,(8,-21),2,8,(-13,7),1,0A0,2,8,(4,-7),14,6,
14,8,(9,-9),0
*000C1,43,uc^
2,14,8,(-9,-25),14,5,8,(9,23),1,041,2,04A,1,8,(-8,-21),2,
8,(8,21),1,8,(8,-21),2,8,(-13,7),1,0A0,2,8,(4,-7),14,6,
14,8,(9,-9),0
*000C2,44,uc
2,14,8,(-9,-25),14,5,8,(5,23),1,041,04F,2,049,1,8,(-8,-21),2,
8,(8,21),1,8,(8,-21),2,8,(-13,7),1,0A0,2,8,(4,-7),14,6,
14,8,(9,-9),0
*000C3,55,uc^
2,14,8,(-9,-25),14,5,8,(4,22),5,1,023,10,(2,-50),01E,10,(2,82),
023,2,6,8,(5,-1),1,8,(-8,-21),2,8,(8,21),1,8,(8,-21),2,8,(-13,7),
1,0A0,2,8,(4,-7),14,6,14,8,(9,-9),0
*000C4,53,uc,,
2,14,8,(-9,-25),14,5,8,(4,24),1,01E,012,016,01A,2,080,1,01E,012,
016,01A,2,03A,1,8,(-8,-21),2,8,(8,21),1,8,(8,-21),2,8,(-13,7),1,

0A0, 2, 8, (4, -7), 14, 6, 14, 8, (9, -9), 0
*000C5, 45, uc^
2, 14, 8, (-9, -25), 14, 5, 8, (7, 23), 1, 10, (2, 64), 2, 02E, 1, 8, (-8, -21), 2,
8, (8, 21), 1, 8, (8, -21), 2, 8, (-13, 7), 1, 0A0, 2, 8, (4, -7), 14, 6,
14, 8, (9, -9), 0
*000C6, 45, uc^
2, 14, 8, (-9, -21), 14, 5, 010, 1, 8, (8, 21), 8, (0, -21), 080, 2, 8, (-8, 7), 1,
058, 2, 8, (5, 4), 1, 050, 2, 8, (-5, 10), 1, 080, 2, 8, (2, -21), 14, 6,
14, 8, (9, -9), 0
*000C7, 65, uc‡
2, 14, 3, 2, 14, 8, (-21, -42), 14, 4, 2, 14, 5, 8, (18, 16), 1, 025, 026, 027, 048,
029, 02A, 02B, 8, (-1, -3), 05C, 8, (1, -3), 02D, 02E, 02F, 040, 021, 022, 023, 2,
8, (-9, -11), 1, 01E, 030, 012, 024, 016, 028, 034, 2, 0A0, 14, 6, 14, 3, 2,
14, 8, (21, -32), 14, 4, 2, 0
*000C8, 53, uc^
2, 14, 3, 2, 14, 8, (-19, -50), 14, 4, 2, 14, 5, 8, (6, 25), 1, 8, (9, -4), 2,
8, (2, -2), 1, 0D8, 8, (0, -19), 0D0, 2, 8, (-13, 10), 1, 080, 2, 8, (7, -10), 14, 6,
14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000C9, 53, uc^
2, 14, 3, 2, 14, 8, (-19, -50), 14, 4, 2, 14, 5, 8, (6, 21), 1, 8, (9, 4), 2,
8, (2, -6), 1, 0D8, 8, (0, -19), 0D0, 2, 8, (-13, 10), 1, 080, 2, 8, (7, -10), 14, 6,
14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000CA, 53, uc^
2, 14, 3, 2, 14, 8, (-19, -50), 14, 4, 2, 14, 5, 8, (6, 23), 1, 041, 010, 04F, 2,
8, (2, -2), 1, 0D8, 8, (0, -21), 0D0, 2, 8, (-13, 11), 1, 080, 2, 8, (7, -11), 14, 6,
14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000CB, 61, uc^
2, 14, 3, 2, 14, 8, (-19, -50), 14, 4, 2, 14, 5, 8, (6, 24), 1, 01E, 012, 016, 01A, 2,
070, 1, 01E, 012, 016, 01A, 2, 8, (4, -3), 1, 0D8, 8, (0, -21), 0D0, 2,
8, (-13, 11), 1, 080, 2, 8, (7, -11), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000CC, 29, uc^
2, 14, 8, (-4, -25), 14, 5, 8, (4, 23), 1, 026, 2, 04D, 1, 8, (0, -21), 2, 8, (4, 0),
14, 6, 14, 8, (4, -9), 0
*000CD, 29, uc^
2, 14, 8, (-4, -25), 14, 5, 8, (4, 23), 1, 022, 2, 04B, 1, 8, (0, -21), 2, 8, (4, 0),
14, 6, 14, 8, (4, -9), 0
*000CE, 30, uc^
2, 14, 8, (-4, -25), 14, 5, 8, (2, 23), 1, 022, 02E, 2, 02A, 1, 8, (0, -21), 2,
8, (4, 0), 14, 6, 14, 8, (4, -9), 0
*000CF, 41, uc^
2, 14, 8, (-4, -25), 14, 5, 8, (1, 24), 1, 01E, 012, 016, 01A, 2, 040, 1, 01E, 012,
016, 01A, 2, 8, (-1, -3), 1, 8, (0, -21), 2, 8, (4, 0), 14, 6, 14, 8, (4, -9), 0
*000D1, 41, uc
2, 14, 8, (-11, -25), 14, 5, 040, 1, 8, (0, 19), 8, (14, -19), 8, (0, 19), 2,
8, (-13, 3), 1, 032, 010, 8, (4, -3), 010, 032, 2, 8, (5, -25), 14, 6,
14, 8, (11, -9), 0
*000D2, 44, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (6, 25), 1, 08F, 2, 8, (-6, -2), 1, 029, 02A, 04B,
05C, 04D, 02E, 02F, 040, 021, 022, 043, 054, 045, 026, 027, 048, 2, 8, (13, -19),
14, 6, 14, 8, (11, -9), 0

*000D3, 42, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (6, 21), 1, 081, 2, 06A, 1, 029, 02A, 04B, 05C, 04D,
02E, 02F, 040, 021, 022, 043, 054, 045, 026, 027, 048, 2, 8, (13, -19), 14, 6,
14, 8, (11, -9), 0

*000D4, 57, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (6, 23), 1, 041, 04F, 2, 8, (-6, -2), 1, 029, 02A,
02B, 8, (-1, -3), 05C, 8, (1, -3), 02D, 02E, 02F, 040, 021, 022, 023, 8, (1, 3),
054, 8, (-1, 3), 025, 026, 027, 048, 2, 8, (13, -21), 14, 6, 14, 8, (11, -9), 0

*000D5, 66, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (6, 22), 5, 1, 023, 10, (2, -50), 01E, 10, (2, 82),
023, 2, 6, 8, (3, -1), 1, 029, 02A, 02B, 8, (-1, -3), 05C, 8, (1, -3), 02D, 02E,
02F, 040, 021, 022, 023, 8, (1, 3), 054, 8, (-1, 3), 025, 026, 027, 048, 2,
8, (13, -21), 14, 6, 14, 8, (11, -9), 0

*000D6, 66, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (6, 24), 1, 01E, 012, 016, 01A, 2, 080, 1, 01E, 012,
016, 01A, 2, 8, (-5, -3), 1, 029, 02A, 02B, 8, (-1, -3), 05C, 8, (1, -3), 02D, 02E,
02F, 040, 021, 022, 023, 8, (1, 3), 054, 8, (-1, 3), 025, 026, 027, 048, 2,
8, (13, -21), 14, 6, 14, 8, (11, -9), 0

*000D8, 54, uc>
2, 14, 8, (-11, -21), 8, (9, 21), 1, 029, 02A, 02B, 8, (-1, -3), 05C, 8, (1, -3),
02D, 02E, 02F, 040, 021, 022, 023, 8, (1, 3), 054, 8, (-1, 3), 025, 026, 027, 048,
2, 8, (-6, -21), 1, 8, (16, 21), 2, 8, (3, -21), 14, 8, (-11, -9), 0

*000D9, 43, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (15, 21), 1, 087, 2, 06B, 1, 0DC, 8, (1, -3), 02E,
8, (3, -1), 020, 8, (3, 1), 022, 8, (1, 3), 0D4, 2, 8, (4, -19), 14, 6,
14, 8, (11, -9), 0

*000DA, 45, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (15, 25), 1, 089, 2, 8, (-3, -2), 1, 0DC, 8, (1, -3),
02E, 8, (3, -1), 020, 8, (3, 1), 022, 8, (1, 3), 0D4, 2, 8, (4, -19), 14, 6,
14, 8, (11, -9), 0

*000DB, 46, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (15, 23), 1, 047, 049, 2, 8, (-3, -2), 1, 0FC,
8, (1, -3), 02E, 8, (3, -1), 020, 8, (3, 1), 022, 8, (1, 3), 0F4, 2, 8, (4, -21),
14, 6, 14, 8, (11, -9), 0

*000DC, 55, uc^
2, 14, 8, (-11, -25), 14, 5, 8, (14, 24), 1, 01E, 012, 016, 01A, 2, 088, 1, 01E,
012, 016, 01A, 2, 8, (-2, -3), 1, 0FC, 8, (1, -3), 02E, 8, (3, -1), 020, 8, (3, 1),
022, 8, (1, 3), 0F4, 2, 8, (4, -21), 14, 6, 14, 8, (11, -9), 0

*000DD, 38, uc^
2, 14, 8, (-9, -25), 14, 5, 8, (13, 25), 1, 089, 2, 049, 1, 8, (8, -9), 0AC, 2,
8, (8, 19), 1, 8, (-8, -9), 2, 8, (9, -10), 14, 6, 14, 8, (9, -9), 0

*000DF, 53, kgers
2, 14, 8, (-9, -21), 14, 5, 030, 1, 012, 8, (0, 16), 023, 012, 021, 020, 02F, 01E,
02D, 02C, 02B, 01A, 029, 028, 2, 020, 1, 8, (3, -1), 01E, 02D, 03C, 02B, 01A, 029,
028, 027, 016, 012, 01E, 2, 8, (10, -2), 14, 6, 14, 8, (9, -9), 0

*000E0, 63, lc...
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (5, 21), 1, 8, (8, -4), 2,
8, (2, -3), 1, 0EC, 2, 0B4, 1, 026, 027, 038, 029, 02A, 8, (-1, -3), 02C,
8, (1, -3), 02E, 02F, 030, 021, 022, 2, 8, (4, -3), 14, 6, 14, 3, 2,
14, 8, (19, -18), 14, 4, 2, 0

*000E1,63,lc
2,14,3,2,14,8,(-19,-42),14,4,2,14,5,8,(5,17),1,8,(8,4),2,
8,(2,-7),1,0EC,2,0B4,1,026,027,038,029,02A,8,(-1,-3),02C,
8,(1,-3),02E,02F,030,021,022,2,8,(4,-3),14,6,14,3,2,
14,8,(19,-18),14,4,2,0
*000E2,64,lc^
2,14,3,2,14,8,(-19,-42),14,4,2,14,5,8,(5,18),1,8,(4,3),8,(4,-3),
2,04D,1,0EC,2,0B4,1,026,027,038,029,02A,8,(-1,-3),02C,8,(1,-3),
02E,02F,030,021,022,2,8,(4,-3),14,6,14,3,2,14,8,(19,-18),14,4,2,0
*000E3,63,lc?
2,14,3,2,14,8,(-19,-42),14,4,2,14,5,8,(4,18),1,032,010,03E,010,
032,2,07C,1,0EC,2,0B4,1,026,027,038,029,02A,8,(-1,-3),02C,
8,(1,-3),02E,02F,030,021,022,2,8,(4,-3),14,6,14,3,2,
14,8,(19,-18),14,4,2,0
*000E4,71,lc,,
2,14,3,2,14,8,(-19,-42),14,4,2,14,5,8,(4,20),1,01E,012,016,01A,2,
090,1,01E,012,016,01A,2,8,(2,-6),1,0EC,2,0B4,1,026,027,038,029,
02A,8,(-1,-3),02C,8,(1,-3),02E,02F,030,021,022,2,8,(4,-3),14,6,
14,3,2,14,8,(19,-18),14,4,2,0
*000E5,63,lc†
2,14,3,2,14,8,(-19,-42),14,4,2,14,5,8,(7,19),1,10,(2,64),2,
8,(8,-5),1,0EC,2,0B4,1,026,027,038,029,02A,8,(-1,-3),02C,
8,(1,-3),02E,02F,030,021,022,2,8,(4,-3),14,6,14,3,2,
14,8,(19,-18),14,4,2,0
*000E6,51,lc
2,14,8,(-10,-14),14,5,8,(10,8),1,070,014,8,(-1,3),026,028,02A,
026,028,02A,8,(-1,-3),04C,8,(1,-3),02E,020,022,02E,020,021,023,2,
8,(-7,11),1,0EC,2,0A0,14,6,14,8,(10,-9),0
*000E7,49,lc‡
2,14,8,(-9,-14),14,5,8,(15,11),1,026,027,038,029,02A,8,(-1,-3),
02C,8,(1,-3),02E,02F,030,021,022,2,8,(-8,-9),1,01E,030,012,024,
016,028,034,2,090,14,6,14,8,(9,-16),0
*000E8,48,lc?
2,14,8,(-9,-21),14,5,8,(5,21),1,08F,2,8,(-10,-9),1,0C0,024,025,
016,027,038,029,02A,8,(-1,-3),02C,8,(1,-3),02E,02F,030,021,022,2,
8,(3,-3),14,6,14,8,(9,-9),0
*000E9,48,lc,
2,14,8,(-9,-21),14,5,8,(5,17),1,081,2,8,(-10,-13),1,0C0,024,025,
016,027,038,029,02A,8,(-1,-3),02C,8,(1,-3),02E,02F,030,021,022,2,
8,(3,-3),14,6,14,8,(9,-9),0
*000EA,51,lc^
2,14,8,(-9,-21),14,5,8,(5,18),1,8,(4,3),8,(4,-3),2,0AA,1,0C0,024,
025,016,027,038,029,02A,8,(-1,-3),02C,8,(1,-3),02E,02F,030,021,
022,2,8,(3,-3),14,6,14,8,(9,-9),0
*000EB,58,lc%
2,14,8,(-9,-21),14,5,8,(4,20),1,01E,012,016,01A,2,080,1,01E,012,
016,01A,2,8,(-9,-12),1,0C0,024,025,016,027,038,029,02A,8,(-1,-3),
02C,8,(1,-3),02E,02F,030,021,022,2,8,(3,-3),14,6,14,8,(9,-9),0
*000EC,27,lc_
2,14,8,(-7,-21),14,5,8,(3,21),1,08F,2,04A,1,0DC,2,8,(4,0),14,6,

14, 8, (7, -9), 0
*000ED, 27, lc
2, 14, 8, (-7, -21), 14, 5, 8, (3, 17), 1, 081, 2, 08B, 1, 0DC, 2, 8, (4, 0), 14, 6,
14, 8, (7, -9), 0
*000EE, 34, lc?
2, 14, 8, (-7, -21), 14, 5, 8, (3, 18), 1, 8, (4, 3), 8, (4, -3), 2, 8, (-4, -5), 1,
0DC, 2, 8, (4, 0), 14, 6, 14, 8, (7, -9), 0
*000EF, 39, lc<
2, 14, 8, (-7, -21), 14, 5, 8, (3, 20), 1, 01E, 012, 016, 01A, 2, 060, 1, 01E, 012,
016, 01A, 2, 8, (-2, -7), 1, 0DC, 2, 8, (4, 0), 14, 6, 14, 8, (7, -9), 0
*000F1, 56, lc
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (4, 18), 1, 032, 010, 03E, 010,
032, 2, 8, (-11, -7), 1, 0EC, 2, 0A4, 1, 032, 021, 030, 02F, 8, (1, -3), 0AC, 2,
8, (4, 0), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000F2, 64, lc•
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (5, 21), 1, 8, (9, -4), 2, 069, 1,
029, 02A, 8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 8, (1, 3), 024,
8, (-1, 3), 026, 027, 038, 2, 8, (11, -14), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4,
2, 0
*000F3, 66, lc
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (5, 17), 1, 8, (9, 4), 2,
8, (-6, -7), 1, 029, 02A, 8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022,
8, (1, 3), 024, 8, (-1, 3), 026, 027, 038, 2, 8, (11, -14), 14, 6, 14, 3, 2,
14, 8, (19, -18), 14, 4, 2, 0
*000F4, 73, lc"
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (5, 18), 3, 2, 1, 8, (9, 6),
8, (9, -6), 2, 4, 2, 8, (-6, -4), 1, 029, 02A, 8, (-1, -3), 02C, 8, (1, -3), 02E,
02F, 030, 021, 022, 8, (1, 3), 024, 8, (-1, 3), 026, 027, 038, 2, 8, (11, -14),
14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000F5, 68, lc^
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (4, 18), 1, 032, 010, 03E, 010,
032, 2, 8, (-7, -7), 1, 029, 02A, 8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021,
022, 8, (1, 3), 024, 8, (-1, 3), 026, 027, 038, 2, 8, (11, -14), 14, 6, 14, 3, 2,
14, 8, (19, -18), 14, 4, 2, 0
*000F6, 74, lc"
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (4, 20), 1, 01E, 012, 016, 01A, 2,
090, 1, 01E, 012, 016, 01A, 2, 8, (-5, -6), 1, 029, 02A, 8, (-1, -3), 02C,
8, (1, -3), 02E, 02F, 030, 021, 022, 8, (1, 3), 024, 8, (-1, 3), 026, 027, 038, 2,
8, (11, -14), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000F7, 41, kto
2, 14, 8, (-9, -14), 14, 5, 8, (8, 13), 1, 01E, 012, 016, 01A, 2, 8, (-5, -6), 1,
0C0, 2, 8, (-7, -6), 1, 01E, 012, 016, 01A, 2, 8, (10, -1), 14, 6, 14, 8, (9, -9), 0
*000F8, 24, lc>
7, 06F, 2, 8, (-3, 14), 14, 8, (9, 9), 1, 8, (-13, -14), 2, 8, (17, 0),
14, 8, (-10, -9), 0
*000F9, 54, lc-
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (5, 21), 1, 8, (9, -4), 2,
8, (-10, -3), 1, 0AC, 8, (1, -3), 02F, 030, 021, 032, 2, 0A4, 1, 0EC, 2, 8, (4, 0),
14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000FA, 54, lc

2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (5, 17), 1, 8, (9, 4), 2,
8, (-10, -7), 1, 0AC, 8, (1, -3), 02F, 030, 021, 032, 2, 0A4, 1, 0EC, 2, 8, (4, 0),
14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000FB, 61, lc-
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (5, 18), 3, 2, 1, 8, (9, 6),
8, (9, -6), 4, 2, 2, 8, (-10, -4), 1, 0AC, 8, (1, -3), 02F, 030, 021, 032, 2, 0A4, 1,
0EC, 2, 8, (4, 0), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000FC, 62, lc_
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (4, 20), 1, 01E, 012, 016, 01A, 2,
090, 1, 01E, 012, 016, 01A, 2, 8, (-9, -6), 1, 0AC, 8, (1, -3), 02F, 030, 021, 032,
2, 0A4, 1, 0EC, 2, 8, (4, 0), 14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*000FD, 43, lc^
2, 14, 8, (-8, -14), 14, 5, 8, (2, 14), 5, 032, 1, 8, (9, 4), 6, 8, (6, -14), 2,
8, (6, 14), 1, 8, (-6, -14), 04B, 02A, 029, 018, 2, 8, (15, 7), 14, 6,
14, 8, (8, -16), 0
*000FF, 53, lc~
2, 14, 8, (-8, -21), 14, 5, 8, (3, 20), 1, 01E, 012, 016, 01A, 2, 080, 1, 01E, 012,
016, 01A, 2, 8, (-9, -6), 1, 8, (6, -14), 2, 8, (6, 14), 1, 8, (-6, -14), 04B, 02A,
029, 018, 2, 8, (15, 7), 14, 6, 14, 8, (8, -16), 0
*00104, 50, c164
2, 14, 8, (-9, -21), 14, 5, 8, (9, 21), 1, 8, (-8, -21), 2, 8, (8, 21), 1,
8, (8, -21), 3, 2, 10, (5, 36), 1, 10, (5, -100), 4, 2, 2, 8, (-13, 7), 1, 0A0, 2,
8, (4, -7), 14, 6, 14, 8, (9, -9), 0
*00105, 66, c165
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (15, 14), 1, 0EC, 3, 2, 10,
(5, 36), 2, 10, (5, -100), 4, 2, 2, 0B4, 1, 026, 027, 038, 029, 02A, 8, (-1, -3),
02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 2, 8, (4, -3), 14, 6, 14, 3, 2,
14, 8, (19, -18), 14, 4, 2, 0
*00106, 71, c143
2, 14, 3, 2, 14, 8, (-21, -42), 14, 4, 2, 14, 5, 3, 2, 2, 8, (18, 48), 1, 8, (8, 6), 2,
8, (-26, -54), 4, 2, 8, (18, 16), 1, 025, 026, 027, 048, 029, 02A, 02B,
8, (-1, -3), 05C, 8, (1, -3), 02D, 02E, 02F, 040, 021, 022, 023, 2, 8, (3, -5),
14, 6, 14, 3, 2, 14, 8, (21, -18), 14, 4, 2, 0
*00107, 54, c134
2, 14, 8, (-9, -14), 14, 5, 8, (15, 11), 3, 2, 8, (-15, 10), 1, 8, (6, 4), 2,
8, (9, -14), 4, 2, 1, 026, 027, 038, 029, 02A, 8, (-1, -3), 02C, 8, (1, -3), 02E,
02F, 030, 021, 022, 2, 8, (3, -3), 14, 6, 14, 8, (9, -9), 0
*0010C, 49, c172
2, 14, 8, (-11, -27), 8, (18, 16), 1, 025, 026, 027, 048, 029, 02A, 02B,
8, (-1, -3), 05C, 8, (1, -3), 02D, 02E, 02F, 040, 021, 022, 023, 2, 8, (-7, 18), 1,
042, 2, 04A, 1, 046, 2, 8, (14, -27), 14, 8, (-10, -9), 0
*0010D, 41, c159
2, 14, 8, (-9, -20), 0F0, 0B4, 1, 026, 027, 038, 029, 02A, 8, (-1, -3), 02C,
8, (1, -3), 02E, 02F, 030, 021, 022, 2, 068, 0D4, 1, 042, 2, 04A, 1, 046, 2,
8, (13, -20), 14, 09A, 0
*0010E, 53, c210
2, 14, 8, (-11, -27), 8, (4, 21), 1, 0FC, 06C, 2, 0F4, 064, 1, 070, 8, (3, -1), 02E,
02D, 8, (1, -3), 05C, 8, (-1, -3), 02B, 02A, 8, (-3, -1), 078, 2, 8, (7, 23), 1,
042, 2, 04A, 1, 046, 2, 8, (14, -27), 14, 8, (-10, -9), 0
*0010F, 46, c212

2, 14, 8, (-10, -21), 8, (15, 21), 1, 0FC, 06C, 2, 0B4, 1, 026, 027, 038, 029, 02A,
8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 2, 8, (4, 18), 1,
8, (-3, -4), 2, 8, (3, -17), 14, 09A, 0
*00118, 66, c168
2, 14, 3, 2, 14, 8, (-19, -42), 14, 4, 2, 14, 5, 8, (4, 21), 1, 8, (0, -21), 2,
8, (0, 21), 1, 0D0, 2, 8, (-13, -10), 1, 080, 2, 8, (-8, -11), 1, 0D0, 3, 2, 10,
(5, 36), 1, 10, (5, -100), 4, 2, 2, 8, (2, 0), 14, 6, 14, 3, 2, 14, 8, (19, -18),
14, 4, 2, 0
*00119, 66, c169
2, 14, 8, (-9, -14), 14, 5, 8, (3, 8), 1, 0C0, 024, 025, 016, 027, 038, 029, 02A,
8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 3, 2, 10, (5, 36), 2, 10, (5, -100), 1,
4, 2, 021, 022, 2, 3, 2, 10, (5, 36), 2, 10, (5, -100), 4, 2, 2, 8, (3, -3), 14, 6,
14, 8, (9, -9), 0
*0011A, 43, c183
2, 14, 8, (-10, -27), 8, (4, 21), 1, 0FC, 06C, 2, 0F4, 064, 1, 0D0, 2, 0D8, 0AC, 1,
080, 2, 088, 0BC, 1, 0D0, 2, 8, (-7, 23), 1, 042, 2, 04A, 1, 046, 2, 8, (13, -27),
14, 09A, 0
*0011B, 44, c216
2, 14, 8, (-9, -20), 030, 084, 1, 0C0, 024, 025, 016, 027, 038, 029, 02A,
8, (-1, -3), 02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 2, 068, 0D4, 1, 042, 2, 04A,
1, 046, 2, 8, (13, -20), 14, 09A, 0
*00141, 51, c157
2, 14, 3, 2, 14, 8, (-17, -42), 14, 4, 2, 14, 5, 8, (3, 21), 1, 8, (0, -21), 2,
8, (-1, 11), 1, 8, (7, 8), 2, 8, (-6, -19), 1, 0C0, 2, 8, (3, 0), 14, 6, 14, 3, 2,
14, 8, (17, -18), 14, 4, 2, 0
*00142, 33, c136
2, 14, 8, (-4, -21), 14, 5, 8, (5, 21), 1, 8, (0, -21), 2, 8, (-1, 10), 1, 8, (4, 6),
2, 8, (3, -16), 14, 6, 14, 8, (4, -9), 0
*00143, 52, c227
2, 14, 8, (-11, -21), 14, 5, 8, (4, 21), 8, (5, 3), 1, 8, (4, 3), 2, 8, (-9, -6), 1,
8, (0, -21), 2, 8, (0, 21), 1, 8, (14, -21), 2, 8, (0, 21), 1, 8, (0, -21), 2,
8, (4, 0), 14, 6, 14, 8, (11, -9), 0
*00144, 57, c228
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (4, 14), 8, (4, 2), 1, 8, (3, 2), 2,
8, (-7, -4), 1, 0EC, 2, 0A4, 1, 032, 021, 030, 02F, 8, (1, -3), 0AC, 2, 8, (4, 0),
14, 6, 14, 3, 2, 14, 8, (19, -18), 14, 4, 2, 0
*00147, 38, c213
2, 14, 8, (-11, -27), 8, (4, 21), 1, 0FC, 06C, 2, 0F4, 064, 1, 8, (14, -21), 0F4,
064, 2, 078, 024, 1, 042, 2, 04A, 1, 046, 2, 8, (15, -27), 14, 8, (-11, -9), 0
*00148, 37, c229
2, 14, 8, (-10, -20), 040, 0E4, 1, 0EC, 2, 0A4, 1, 032, 021, 030, 02F, 8, (1, -3),
0AC, 2, 8, (-5, 16), 1, 042, 2, 04A, 1, 046, 2, 8, (13, -20), 14, 09A, 0
*00150, 58, c138
2, 14, 8, (-11, -21), 14, 5, 8, (9, 21), 1, 029, 02A, 02B, 8, (-1, -3), 05C,
8, (1, -3), 02D, 02E, 02F, 040, 021, 022, 023, 8, (1, 3), 054, 8, (-1, 3), 025,
026, 027, 048, 2, 034, 1, 044, 2, 040, 1, 04C, 2, 8, (9, -24), 14, 6,
14, 8, (11, -9), 0
*00151, 68, c139
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (8, 14), 1, 029, 02A, 8, (-1, -3),
02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 8, (1, 3), 024, 8, (-1, 3), 026, 027,

038, 2, 8, (4, 4), 1, 044, 2, 058, 1, 04C, 2, 8, (12, -18), 14, 6, 14, 3, 2,
14, 8, (19, -18), 14, 4, 2, 0
*00158, 53, c252
2, 14, 8, (-11, -27), 8, (4, 21), 1, 0FC, 06C, 2, 0F4, 064, 1, 090, 8, (3, -1), 01E,
02D, 02C, 02B, 01A, 8, (-3, -1), 098, 2, 070, 1, 8, (7, -11), 2, 8, (-7, 23), 1,
042, 2, 04A, 1, 046, 2, 8, (14, -27), 14, 8, (-10, -9), 0
*00159, 35, c253
2, 14, 8, (-7, -20), 040, 0E4, 1, 0EC, 2, 084, 1, 8, (1, 3), 022, 021, 030, 2, 058,
024, 1, 042, 2, 04A, 1, 046, 2, 0FD, 05D, 14, 8, (-6, -9), 0
*0015A, 62, c151
2, 14, 8, (-10, -21), 14, 5, 8, (17, 18), 8, (-9, 6), 1, 8, (4, 3), 2, 8, (5, -9), 1,
026, 8, (-3, 1), 048, 8, (-3, -1), 02A, 02C, 02D, 01E, 02F, 8, (6, -2), 02F, 01E,
02D, 03C, 02A, 8, (-3, -1), 048, 8, (-3, 1), 026, 2, 8, (17, -3), 14, 6,
14, 8, (10, -9), 0
*0015B, 71, c152
2, 14, 3, 2, 14, 8, (-17, -28), 14, 4, 2, 14, 5, 8, (14, 11), 8, (-7, 5), 1, 8, (3, 2),
2, 8, (4, -7), 1, 025, 8, (-3, 1), 038, 8, (-3, -1), 02B, 02D, 02F, 8, (5, -1), 02F,
02D, 01C, 02B, 8, (-3, -1), 038, 8, (-3, 1), 025, 2, 8, (14, -3), 14, 6, 14, 3, 2,
14, 8, (17, -18), 14, 4, 2, 0
*00160, 57, c230
2, 14, 8, (-10, -27), 8, (17, 18), 1, 026, 8, (-3, 1), 048, 8, (-3, -1), 02A, 02C,
02D, 01E, 02F, 8, (6, -2), 02F, 01E, 02D, 03C, 02A, 8, (-3, -1), 048, 8, (-3, 1),
026, 2, 8, (7, 20), 1, 042, 2, 04A, 1, 046, 2, 8, (14, -27), 14, 8, (-10, -9), 0
*00161, 52, c231
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8, (5, -1), 02F, 02D, 01C, 02B, 8, (-3, -1), 038, 8, (-3, 1), 025, 2, 060, 0D4, 1,
042, 2, 04A, 1, 046, 2, 8, (12, -20), 14, 8, (-8, -9), 0
*00164, 35, c155
2, 14, 8, (-8, -27), 8, (8, 21), 1, 0FC, 06C, 2, 8, (-7, 21), 1, 0E0, 2, 078, 024, 1,
042, 2, 04A, 1, 046, 2, 8, (12, -27), 14, 8, (-8, -9), 0
*00165, 36, c156
2, 14, 8, (-6, -21), 8, (5, 21), 1, 0FC, 02C, 8, (1, -3), 02F, 020, 2, 088, 0E4, 1,
070, 2, 074, 1, 8, (-3, -4), 2, 8, (6, -17), 14, 8, (-6, -9), 0
*0016E, 45, c222
2, 14, 8, (-11, -27), 8, (4, 21), 1, 0FC, 8, (1, -3), 02E, 8, (3, -1), 020,
8, (3, 1), 022, 8, (1, 3), 0F4, 2, 078, 024, 1, 021, 024, 027, 029, 02C, 02F, 2,
8, (11, -23), 14, 8, (-11, -9), 0
*0016F, 38, c133
2, 14, 8, (-10, -20), 040, 0E4, 1, 0AC, 8, (1, -3), 02F, 030, 021, 032, 2, 0A4, 1,
0EC, 2, 8, (-5, 16), 1, 021, 024, 027, 029, 02C, 02F, 2, 8, (9, -16), 14, 09A, 0
*00170, 52, c235
2, 14, 8, (-11, -21), 14, 5, 8, (4, 21), 1, 0FC, 8, (1, -3), 02E, 8, (3, -1), 020,
8, (3, 1), 022, 8, (1, 3), 0F4, 2, 058, 034, 1, 044, 2, 048, 1, 04C, 2, 8, (9, -2), 2,
8, (4, -22), 14, 6, 14, 8, (11, -9), 0
*00171, 60, c251
2, 14, 3, 2, 14, 8, (-19, -28), 14, 4, 2, 14, 5, 8, (4, 14), 1, 0AC, 8, (1, -3), 02F,
030, 021, 032, 2, 0A4, 1, 0EC, 2, 8, (-8, 18), 1, 044, 2, 050, 1, 04C, 2,
8, (3, -18), 2, 8, (4, 0), 14, 6, 14, 3, 2, 14, 8, (19, -20), 14, 4, 2, 0
*00179, 45, c141
2, 14, 8, (-10, -21), 14, 5, 8, (17, 21), 1, 8, (-14, -21), 2, 8, (5, 24), 1,

8, (4, 3), 2, 8, (-9, -6), 1, 0E0, 2, 8, (-14, -21), 1, 0E0, 2, 8, (3, 0), 14, 6,
 14, 8, (10, -9), 0
 *0017A, 58, c171
 2, 14, 3, 2, 14, 8, (-17, -28), 14, 4, 2, 14, 5, 8, (14, 14), 8, (-7, 2), 1, 8, (3, 2),
 2, 8, (4, -4), 1, 8, (-11, -14), 2, 0E4, 1, 0B0, 2, 8, (-11, -14), 1, 0B0, 2,
 8, (3, 0), 14, 6, 14, 3, 2, 14, 8, (17, -18), 14, 4, 2, 0
 *0017B, 45, c189
 2, 14, 8, (-10, -21), 14, 5, 8, (17, 21), 5, 3, 2, 8, (-13, 6), 1, 10, (2, 96), 4, 2,
 6, 1, 8, (-14, -21), 0E0, 2, 8, (-14, 21), 1, 0E0, 2, 8, (3, -21), 14, 6,
 14, 8, (10, -9), 0
 *0017C, 59, c190
 2, 14, 3, 2, 14, 8, (-17, -28), 14, 4, 2, 14, 5, 8, (14, 14), 5, 3, 2, 8, (-11, 5), 1,
 10, (1, 96), 4, 2, 6, 8, (-11, -14), 2, 0E4, 1, 0B0, 2, 8, (-11, -14), 1, 0B0, 2,
 8, (3, 0), 14, 6, 14, 3, 2, 14, 8, (17, -18), 14, 4, 2, 0
 *0017D, 42, c166
 2, 14, 8, (-10, -27), 8, (17, 21), 1, 8, (-14, -21), 2, 0F4, 064, 1, 0E0, 2,
 8, (-14, -21), 1, 0E0, 2, 8, (-7, 23), 1, 042, 2, 04A, 1, 046, 2, 8, (14, -27),
 14, 8, (-10, -9), 0
 *0017E, 38, c167
 2, 14, 8, (-9, -20), 0E2, 1, 8, (-11, -14), 2, 0E4, 1, 0B0, 2, 0B8, 0EC, 1, 0B0, 2,
 8, (-5, 16), 1, 042, 2, 04A, 1, 046, 2, 8, (12, -20), 14, 8, (-8, -9), 0
 *00410, 38, _
 2, 14, 8, (-9, -21), 2, 8, (4, 7), 1, 9, (10, 0), (0, 0), 2, 8, (-13, -7), 1, 9,
 (8, 21), (8, -21), (0, 0), 2, 8, (1, 0), 1, 2, 14, 8, (-9, -9), 0
 *00411, 46, _
 2, 14, 8, (-10, -21), 2, 8, (15, 21), 1, 9, (-11, 0), (0, -21), (9, 0), (3, 1),
 (1, 1), (1, 2), (0, 3), (-1, 2), (-1, 1), (-3, 1), (-9, 0), (0, 0), 2, 8, (17, -11),
 1, 2, 14, 8, (-11, -9), 0
 *00412, 68, ,
 2, 14, 8, (-11, -21), 2, 8, (13, 21), 1, 9, (-9, 0), (0, -21), (9, 0), (3, 1),
 (1, 1), (1, 2), (0, 3), (-1, 2), (-1, 1), (-3, 1), (-9, 0), (0, 0), 2, 8, (9, 10), 1,
 9, (3, -1), (1, -1), (1, -2), (0, -2), (-1, -2), (-1, -1), (-3, -1), (0, 0), 2,
 8, (9, -11), 1, 2, 14, 8, (-11, -9), 0
 *00413, 28, f
 2, 14, 8, (-8, -21), 2, 8, (16, 21), 1, 9, (-12, 0), (0, -21), (0, 0), 2, 8, (13, 0),
 1, 2, 14, 8, (-9, -9), 0
 *00414, 50, ,,
 2, 14, 8, (-12, -21), 2, 8, (22, -4), 1, 9, (0, 4), (-20, 0), (0, -4), (0, 0), 2,
 8, (2, 4), 1, 9, (3, 3), (1, 2), (1, 4), (0, 12), (11, 0), (0, -21), (0, 0), 2,
 8, (4, 0), 1, 2, 14, 8, (-12, -13), 0
 *00415, 40, ...
 2, 14, 8, (-9, -21), 2, 8, (17, 21), 1, 9, (-13, 0), (0, -21), (13, 0), (0, 0), 2,
 8, (-1, 11), 1, 9, (-12, 0), (0, 0), 2, 8, (15, -11), 1, 2, 14, 8, (-10, -9), 0
 *00416, 66, †
 2, 14, 8, (-12, -21), 2, 8, (1, 0), 1, 9, (9, 12), (0, 0), 2, 8, (2, 9), 1, 9,
 (0, -21), (0, 0), 2, 8, (11, 21), 1, 9, (-11, -11), (0, 0), 2, 8, (-11, 11), 1, 9,
 (11, -11), (0, 0), 2, 8, (11, -10), 1, 9, (-9, 12), (0, 0), 2, 8, (10, -12), 1, 2,
 14, 8, (-12, -9), 0
 *00417, 68, ‡
 2, 14, 8, (-9, -21), 2, 8, (3, 20), 1, 9, (4, 1), (3, 0), (3, -1), (1, -2), (0, -2),

(-1, -2), (-3, -2), (3, -1), (2, -2), (1, -2), (0, -2), (-1, -2), (-2, -2),
 (-3, -1), (-3, 0), (-3, 1), (-3, 2), (0, 0), 2, 8, (9, 9), 1, 9, (-4, 0), (0, 0), 2,
 8, (12, -12), 1, 2, 14, 8, (-9, -9), 0
 *00418, 30, ^
 2, 14, 8, (-11, -21), 2, 8, (4, 21), 1, 9, (0, -21), (14, 21), (0, -21), (0, 0), 2,
 8, (4, 0), 1, 2, 14, 8, (-11, -9), 0
 *00419, 48, %
 2, 14, 8, (-11, -21), 2, 8, (4, 21), 1, 9, (0, -21), (14, 21), (0, -21), (0, 0), 2,
 8, (-11, 26), 1, 9, (1, -1), (2, -1), (2, 0), (2, 1), (1, 1), (0, 0), 2, 8, (7, -26),
 1, 2, 14, 8, (-11, -9), 0
 *0041A, 46, \$
 2, 14, 8, (-10, -21), 2, 8, (18, 0), 1, 9, (-9, 12), (0, 0), 2, 8, (9, 9), 1, 9,
 (-14, -14), (0, 0), 2, 8, (0, 14), 1, 9, (0, -21), (0, 0), 2, 8, (16, 0), 1, 2,
 14, 8, (-10, -9), 0
 *0041B, 36, <
 2, 14, 8, (-10, -21), 2, 8, (16, 0), 1, 9, (0, 21), (-11, 0), (0, -17), (-1, -2),
 (-1, -1), (-2, -1), (0, 0), 2, 8, (19, 0), 1, 2, 14, 8, (-10, -9), 0
 *0041C, 32, &
 2, 14, 8, (-12, -21), 2, 8, (20, 0), 1, 9, (0, 21), (-8, -15), (-8, 15), (0, -21),
 (0, 0), 2, 8, (20, 0), 1, 2, 14, 8, (-12, -9), 0
 *0041D, 46, _
 2, 14, 8, (-11, -21), 2, 8, (4, 21), 1, 9, (0, -21), (0, 0), 2, 8, (0, 11), 1, 9,
 (14, 0), (0, 0), 2, 8, (0, -11), 1, 9, (0, 21), (0, 0), 2, 8, (4, -21), 1, 2,
 14, 8, (-11, -9), 0
 *0041E, 64, _
 2, 14, 8, (-11, -21), 2, 8, (9, 21), 1, 9, (4, 0), (2, -1), (2, -2), (1, -2),
 (1, -3), (0, -5), (-1, -3), (-1, -2), (-2, -2), (-2, -1), (-4, 0), (-2, 1),
 (-2, 2), (-1, 2), (-1, 3), (0, 5), (1, 3), (1, 2), (2, 2), (2, 1), (0, 0), 2,
 8, (13, -21), 1, 2, 14, 8, (-11, -9), 0
 *0041F, 30, _
 2, 14, 8, (-11, -21), 2, 8, (4, 0), 1, 9, (0, 21), (14, 0), (0, -21), (0, 0), 2,
 8, (4, 0), 1, 2, 14, 8, (-11, -9), 0
 *00420, 44, _
 2, 14, 8, (-10, -21), 2, 8, (4, 0), 1, 9, (0, 21), (9, 0), (3, -1), (1, -1), (1, -2),
 (0, -3), (-1, -2), (-1, -1), (-3, -1), (-9, 0), (0, 0), 2, 8, (16, -10), 1, 2,
 14, 8, (-10, -9), 0
 *00421, 62, '
 2, 14, 8, (-10, -21), 2, 8, (18, 16), 1, 9, (-1, 2), (-1, 1), (-1, 1), (-2, 1),
 (-4, 0), (-2, -1), (-1, -1), (-1, -1), (-1, -2), (-1, -3), (0, -5), (1, -3),
 (1, -2), (2, -2), (2, -1), (4, 0), (2, 1), (2, 2), (1, 2), (0, 0), 2, 8, (2, -5), 1,
 2, 14, 8, (-10, -9), 0
 *00422, 36, '
 2, 14, 8, (-8, -21), 2, 8, (8, 21), 1, 9, (0, -21), (0, 0), 2, 8, (-7, 21), 1, 9,
 (14, 0), (0, 0), 2, 8, (1, -21), 1, 2, 14, 8, (-8, -9), 0
 *00423, 44, "
 2, 14, 8, (-8, -21), 2, 8, (15, 21), 1, 9, (-7, -17), (-1, -2), (-1, -1), (-2, -1),
 (-1, 0), (0, 0), 2, 8, (-2, 21), 1, 9, (7, -17), (0, 0), 2, 8, (8, -4), 1, 2,
 14, 8, (-8, -9), 0
 *00424, 74, "
 2, 14, 8, (-13, -21), 2, 8, (11, 19), 1, 9, (4, 0), (3, -1), (2, -1), (2, -2),

$(1, -2), (0, -4), (-1, -2), (-2, -2), (-2, -1), (-3, -1), (-4, 0), (-3, 1),$
 $(-2, 1), (-2, 2), (-1, 2), (0, 4), (1, 2), (2, 2), (2, 1), (3, 1), (0, 0), 2,$
 $8, (2, 2), 1, 9, (0, -21), (0, 0), 2, 8, (13, 0), 1, 2, 14, 8, (-13, -9), 0$
 *00425, 36, •
 $2, 14, 8, (-8, -21), 2, 8, (15, 21), 1, 9, (-14, -21), (0, 0), 2, 8, (0, 21), 1, 9,$
 $(14, -21), (0, 0), 2, 8, (1, 0), 1, 2, 14, 8, (-8, -9), 0$
 *00426, 40, -
 $2, 14, 8, (-11, -21), 2, 8, (4, 21), 1, 9, (0, -21), (16, 0), (0, -4), (0, 0), 2,$
 $8, (-2, 25), 1, 9, (0, -21), (0, 0), 2, 8, (4, 0), 1, 2, 14, 8, (-11, -13), 0$
 *00427, 44, -
 $2, 14, 8, (-10, -21), 2, 8, (3, 21), 1, 9, (0, -8), (1, -3), (1, -1), (3, -1),$
 $(9, 0), (0, 0), 2, 8, (0, 13), 1, 9, (0, -21), (0, 0), 2, 8, (4, 0), 1, 2,$
 $14, 8, (-11, -9), 0$
 *00428, 40, ~
 $2, 14, 8, (-14, -21), 2, 8, (4, 21), 1, 9, (0, -21), (21, 0), (0, 21), (0, 0), 2,$
 $8, (-10, 0), 1, 9, (0, -21), (0, 0), 2, 8, (14, 0), 1, 2, 14, 8, (-15, -9), 0$
 *00429, 50, ™
 $2, 14, 8, (-14, -21), 2, 8, (4, 21), 1, 9, (0, -21), (23, 0), (0, -4), (0, 0), 2,$
 $8, (-12, 25), 1, 9, (0, -21), (0, 0), 2, 8, (10, 21), 1, 9, (0, -21), (0, 0), 2,$
 $8, (4, 0), 1, 2, 14, 8, (-15, -13), 0$
 *0042A, 48, š
 $2, 14, 8, (-10, -21), 2, 8, (1, 21), 1, 9, (4, 0), (0, -21), (8, 0), (2, 0), (2, 1),$
 $(1, 1), (1, 2), (0, 4), (-1, 2), (-1, 1), (-2, 1), (-10, 0), (0, 0), 2,$
 $8, (16, -12), 1, 2, 14, 8, (-11, -9), 0$
 *0042B, 54, >
 $2, 14, 8, (-12, -21), 2, 8, (4, 21), 1, 9, (0, -21), (9, 0), (2, 1), (1, 1), (1, 2),$
 $(0, 4), (-1, 2), (-1, 1), (-2, 1), (-9, 0), (0, 0), 2, 8, (16, 9), 1, 9, (0, -21),$
 $(0, 0), 2, 8, (4, 0), 1, 2, 14, 8, (-12, -9), 0$
 *0042C, 44, œ
 $2, 14, 8, (-10, -21), 2, 8, (4, 21), 1, 9, (0, -21), (10, 0), (2, 1), (1, 1), (1, 2),$
 $(0, 4), (-1, 2), (-1, 1), (-2, 1), (-10, 0), (0, 0), 2, 8, (16, -12), 1, 2,$
 $14, 8, (-10, -9), 0$
 *0042D, 64, _
 $2, 14, 8, (-9, -21), 2, 8, (6, 11), 1, 9, (10, 0), (0, 0), 2, 8, (-14, 7), 1, 9,$
 $(2, 2), (2, 1), (4, 0), (2, -1), (2, -2), (1, -2), (1, -3), (0, -5), (-1, -3),$
 $(-1, -2), (-2, -2), (-2, -1), (-4, 0), (-2, 1), (-2, 2), (0, 0), 2, 8, (17, -3), 1,$
 $2, 14, 8, (-10, -9), 0$
 *0042E, 76, _
 $2, 14, 8, (-13, -21), 2, 8, (14, 21), 1, 9, (4, 0), (2, -1), (2, -3), (1, -4),$
 $(0, -5), (-1, -4), (-2, -3), (-2, -1), (-4, 0), (-2, 1), (-2, 3), (-1, 4), (0, 5),$
 $(1, 4), (2, 3), (2, 1), (0, 0), 2, 8, (-5, -10), 1, 9, (-5, 0), (0, 0), 2, 8, (0, 10),$
 $1, 9, (0, -21), (0, 0), 2, 8, (22, 0), 1, 2, 14, 8, (-13, -9), 0$
 *0042F, 54, Ÿ
 $2, 14, 8, (-10, -21), 2, 8, (2, 0), 1, 9, (7, 11), (0, 0), 2, 8, (7, -11), 1, 9,$
 $(0, 21), (-9, 0), (-3, -1), (-1, -1), (-1, -2), (0, -2), (1, -2), (1, -1),$
 $(3, -1), (9, 0), (0, 0), 2, 8, (4, -11), 1, 2, 14, 8, (-10, -9), 0$
 *00430, 62,
 $2, 14, 8, (-9, -14), 2, 8, (15, 3), 1, 9, (-2, -2), (-2, -1), (-3, 0), (-2, 1),$
 $(-1, 1), (-1, 1), (-1, 3), (0, 2), (1, 3), (2, 2), (2, 1), (3, 0), (2, -1), (2, -2),$
 $(0, 0), 2, 8, (0, 3), 1, 9, (0, -14), (0, 0), 2, 8, (4, 0), 1, 2, 14, 8, (-10, -9), 0$

*00431, 64,
 2, 14, 8, (-9, -21), 2, 8, (14, 21), 1, 9, (-2, -1), (-5, -1), (-2, -1), (-1, -2),
 (0, -12), (1, -2), (1, -1), (2, -1), (3, 0), (2, 1), (2, 2), (1, 3), (0, 2),
 (-1, 3), (-1, 1), (-1, 1), (-2, 1), (-3, 0), (-2, -1), (-2, -2), (0, 0), 2,
 8, (15, -11), 1, 2, 14, 8, (-10, -9), 0
 *00432, 68,
 2, 14, 8, (-9, -21), 2, 8, (4, 11), 1, 9, (2, 2), (2, 1), (3, 2), (1, 2), (-1, 2),
 (-1, 1), (-3, 0), (-2, -1), (-1, -1), (0, -15), (1, -2), (1, -1), (2, -1), (3, 0),
 (2, 1), (2, 2), (1, 3), (0, 2), (-1, 3), (-2, 2), (-2, 1), (-3, 0), (0, 0), 2,
 8, (11, -14), 1, 2, 14, 8, (-10, -9), 0
 *00433, 56,
 2, 14, 8, (-8, -14), 2, 8, (3, 11), 1, 9, (1, 2), (3, 1), (3, 0), (3, -1), (1, -2),
 (-1, -2), (-2, -1), (-5, -1), (-2, -1), (-1, -2), (0, -1), (1, -2), (3, -1),
 (3, 0), (3, 1), (1, 2), (0, 0), 2, 8, (3, -3), 1, 2, 14, 8, (-9, -9), 0
 *00434, 72,
 2, 14, 8, (-9, -14), 2, 8, (15, 11), 1, 9, (-1, 1), (-1, 1), (-2, 1), (-3, 0),
 (-2, -1), (-2, -2), (-1, -3), (0, -2), (1, -3), (2, -2), (2, -1), (3, 0), (2, 1),
 (2, 2), (0, 0), 2, 8, (0, 11), 1, 9, (0, -16), (-1, -3), (-1, -1), (-2, -1),
 (-3, 0), (-2, 1), (0, 0), 2, 8, (13, 6), 1, 2, 14, 8, (-10, -16), 0
 *00435, 56,
 2, 14, 8, (-9, -14), 2, 8, (3, 8), 1, 9, (12, 0), (0, 2), (-1, 2), (-1, 1), (-2, 1),
 (-3, 0), (-2, -1), (-2, -2), (-1, -3), (0, -2), (1, -3), (2, -2), (2, -1), (3, 0),
 (2, 1), (2, 2), (0, 0), 2, 8, (3, -3), 1, 2, 14, 8, (-9, -9), 0
 *00436, 58,
 2, 14, 8, (-11, -14), 2, 8, (1, 0), 1, 9, (7, 8), (0, 0), 2, 8, (12, 6), 1, 9,
 (-9, -9), (-9, 9), (0, 0), 2, 8, (9, 0), 1, 9, (0, -14), (0, 0), 2, 8, (3, 8), 1, 9,
 (7, -8), (0, 0), 2, 8, (1, 0), 1, 2, 14, 8, (-11, -9), 0
 *00437, 62,
 2, 14, 8, (-7, -14), 2, 8, (8, 8), 1, 9, (2, -1), (1, -1), (1, -2), (-1, -2),
 (-1, -1), (-2, -1), (-4, 0), (-3, 1), (0, 0), 2, 8, (0, 12), 1, 9, (3, 1), (3, 0),
 (3, -1), (1, -2), (-1, -2), (-2, -1), (-3, 0), (0, 0), 2, 8, (9, -8), 1, 2,
 14, 8, (-7, -9), 0
 *00438, 46,
 2, 14, 8, (-9, -14), 2, 8, (4, 14), 1, 9, (0, -10), (1, -3), (2, -1), (3, 0), (2, 1),
 (3, 3), (0, 0), 2, 8, (0, 10), 1, 9, (0, -14), (0, 0), 2, 8, (4, 0), 1, 2,
 14, 8, (-10, -9), 0
 *00439, 64,
 2, 14, 8, (-9, -14), 2, 8, (4, 14), 1, 9, (0, -10), (1, -3), (2, -1), (3, 0), (2, 1),
 (3, 3), (0, 0), 2, 8, (0, 10), 1, 9, (0, -14), (0, 0), 2, 8, (-9, 18), 1, 9, (1, -1),
 (2, -1), (2, 0), (2, 1), (1, 1), (0, 0), 2, 8, (5, -18), 1, 2, 14, 8, (-10, -9), 0
 *0043A, 46,
 2, 14, 8, (-8, -14), 2, 8, (4, 14), 1, 9, (0, -14), (0, 0), 2, 8, (4, 8), 1, 9,
 (7, -8), (0, 0), 2, 8, (-1, 14), 1, 9, (-10, -10), (0, 0), 2, 8, (12, -4), 1, 2,
 14, 8, (-8, -9), 0
 *0043B, 44,
 2, 14, 8, (-9, -14), 2, 8, (14, 14), 1, 9, (-6, 0), (0, -10), (-1, -3), (-2, -1),
 (-2, 0), (0, 0), 2, 8, (11, 14), 1, 9, (0, -14), (0, 0), 2, 8, (4, 0), 1, 2,
 14, 8, (-9, -9), 0
 *0043C, 32,
 2, 14, 8, (-11, -14), 2, 8, (18, 0), 1, 9, (0, 14), (-7, -11), (-7, 11), (0, -14),

$(0, 0), 2, 8, (18, 0), 1, 2, 14, 8, (-11, -9), 0$
 *0043D, 46, -
 $2, 14, 8, (-9, -14), 2, 8, (4, 7), 1, 9, (11, 0), (0, 0), 2, 8, (0, 7), 1, 9, (0, -14),$
 $(0, 0), 2, 8, (-11, 14), 1, 9, (0, -14), (0, 0), 2, 8, (15, 0), 1, 2,$
 $14, 8, (-10, -9), 0$
 *0043E, 56,
 $2, 14, 8, (-9, -14), 2, 8, (8, 14), 1, 9, (3, 0), (2, -1), (2, -2), (1, -3), (0, -2),$
 $(-1, -3), (-2, -2), (-2, -1), (-3, 0), (-2, 1), (-2, 2), (-1, 3), (0, 2), (1, 3),$
 $(2, 2), (2, 1), (0, 0), 2, 8, (11, -14), 1, 2, 14, 8, (-10, -9), 0$
 *0043F, 46,
 $2, 14, 8, (-9, -14), 2, 8, (4, 14), 1, 9, (0, -14), (0, 0), 2, 8, (0, 10), 1, 9,$
 $(3, 3), (2, 1), (3, 0), (2, -1), (1, -2), (0, -11), (0, 0), 2, 8, (4, 0), 1, 2,$
 $14, 8, (-10, -9), 0$
 *00440, 60,
 $2, 14, 8, (-9, -14), 2, 8, (4, 14), 1, 9, (0, -21), (0, 0), 2, 8, (0, 18), 1, 9,$
 $(2, 2), (2, 1), (3, 0), (2, -1), (2, -2), (1, -3), (0, -2), (-1, -3), (-2, -2),$
 $(-2, -1), (-3, 0), (-2, 1), (-2, 2), (0, 0), 2, 8, (15, -3), 1, 2,$
 $14, 8, (-10, -16), 0$
 *00441, 50,
 $2, 14, 8, (-8, -14), 2, 8, (15, 11), 1, 9, (-2, 2), (-2, 1), (-3, 0), (-2, -1),$
 $(-2, -2), (-1, -3), (0, -2), (1, -3), (2, -2), (2, -1), (3, 0), (2, 1), (2, 2),$
 $(0, 0), 2, 8, (2, -3), 1, 2, 14, 8, (-9, -9), 0$
 *00442, 66,
 $2, 14, 8, (-14, -14), 2, 8, (4, 14), 1, 9, (0, -14), (0, 0), 2, 8, (0, 10), 1, 9,$
 $(3, 3), (2, 1), (2, 0), (2, -1), (1, -3), (0, -10), (0, 0), 2, 8, (0, 10), 1, 9,$
 $(3, 3), (2, 1), (2, 0), (2, -1), (1, -3), (0, -10), (0, 0), 2, 8, (4, 0), 1, 2,$
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 *00443, 44,
 $2, 14, 8, (-7, -14), 2, 8, (1, 14), 1, 9, (6, -14), (0, 0), 2, 8, (6, 14), 1, 9,$
 $(-6, -14), (-2, -4), (-2, -2), (-2, -1), (-1, 0), (0, 0), 2, 8, (14, 7), 1, 2,$
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 $2, 14, 8, (-11, -14), 2, 8, (14, 14), 1, 9, (-6, 0), (-2, -1), (-2, -2), (-1, -3),$
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 $(-2, 2), (-2, 1), (0, 0), 2, 8, (-3, 0), 1, 9, (0, -21), (0, 0), 2, 8, (11, 7), 1, 2,$
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 *00445, 36,
 $2, 14, 8, (-6, -14), 2, 8, (1, 14), 1, 9, (11, -14), (0, 0), 2, 8, (0, 14), 1, 9,$
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 *00446, 50,
 $2, 14, 8, (-9, -14), 2, 8, (4, 14), 1, 9, (0, -10), (1, -3), (2, -1), (3, 0), (2, 1),$
 $(3, 3), (0, 0), 2, 8, (0, 10), 1, 9, (0, -14), (2, 0), (0, -3), (0, 0), 2, 8, (2, 3),$
 $1, 2, 14, 8, (-10, -12), 0$
 *00447, 46,
 $2, 14, 8, (-9, -14), 2, 8, (3, 14), 1, 9, (0, -5), (1, -3), (2, -1), (3, 0), (2, 1),$
 $(3, 3), (0, 0), 2, 8, (0, 5), 1, 9, (0, -14), (0, 0), 2, 8, (4, 0), 1, 2,$
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 *00448, 66,
 $2, 14, 8, (-14, -14), 2, 8, (24, 0), 1, 9, (0, 14), (0, 0), 2, 8, (0, -10), 1, 9,$
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*00449, 70,

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(-2, 1), (-1, 3), (0, 10), (0, 0), 2, 8, (10, 0), 1, 9, (0, -14), (2, 0), (0, -3),
(0, 0), 2, 8, (2, 3), 1, 2, 14, 8, (-14, -12), 0

*0044A, 64,

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*0044B, 72,

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*0044C, 62,

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*0044D, 60,

2, 14, 8, (-8, -14), 2, 8, (2, 11), 1, 9, (2, 2), (2, 1), (3, 0), (2, -1), (2, -2),
(1, -3), (0, -2), (-1, -3), (-2, -2), (-2, -1), (-3, 0), (-2, 1), (-2, 2), (0, 0),
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*0044E, 70,

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(5, 0), (0, 1), (1, 3), (2, 2), (2, 1), (2, 0), (2, -1), (2, -2), (1, -3), (0, -2),
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*0044F, 54,

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*020A0, 4, keuroRef2

7, 0020AC, 0

*020A7, 49, kpes

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*020AC, 45, keuro

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*02126, 53, komega

2, 14, 8, (-11, -21), 14, 5, 8, (3, 1), 1, 01E, 040, 014, 036, 025, 8, (-1, 3), 044,
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*02205, 64, kdiam

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02C, 8, (1, -3), 02E, 02F, 030, 021, 022, 8, (1, 3), 024, 8, (-1, 3), 026, 027,
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2, 0

*0221E, 45, kinfin

2, 14, 8, (-11, -14), 14, 5, 8, (11, 11), 1, 025, 027, 028, 029, 02B, 01C, 02D,
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2, 8, (11, -10), 14, 6, 14, 8, (11, -9), 0

*02264, 36, kleq

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*02302, 25, ktria

2, 14, 8, (-10, -21), 14, 5, 040, 1, 0C0, 084, 066, 06A, 08C, 2, 8, (16, 0), 14, 6,
14, 8, (10, -9), 0

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*00029, 15, krp
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*0002F, 17, kdiv
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*00031, 18, n1
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*00032, 23, n2
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14, 8, (-4, -3), 0
*00033, 29, n3
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*00034, 19, n4
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*00035, 23, n5
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14, 8, (-4, -3), 0
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06C, 14, 8, (-4, -3), 0
*00037, 16, n7
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*00038, 32, n8
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2, 020, 1, 01E, 01C, 01A, 028, 2, 050, 14, 8, (-4, -3), 0
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03C, 14, 8, (-4, -3), 0
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*0003B, 34, ksmc
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020, 14, 3, 2, 14, 8, (-5, -8), 14, 4, 2, 0
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*0003D, 18, keq
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04C, 01E, 030, 2, 020, 14, 8, (-4, -3), 0
*00041, 21, uca
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*00044, 22, ucd
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*00045, 25, uce
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2,14,06C,1,044,2,014,1,014,2,020,06C,14,8,(-2,-3),0
*0006A,35,lcj
2,14,3,2,14,8,(-3,-12),14,4,2,01C,1,01E,010,012,054,2,014,1,014,
2,020,06C,14,3,2,14,8,(-7,-10),14,4,2,0
*0006B,23,lck
2,14,8,(-2,-6),1,064,2,04C,1,020,022,2,02A,1,02E,2,020,
14,8,(-4,-3),0
*0006C,28,lcl
2,14,3,2,14,8,(-1,-12),14,4,2,064,1,05C,01E,2,020,14,3,2,
14,8,(-5,-6),14,4,2,0
*0006D,24,lcm
2,14,04B,1,044,2,01C,1,012,01E,01C,2,014,1,012,01E,03C,2,020,
14,8,(-4,-3),0
*0006E,21,lcn
2,14,8,(-2,-6),1,044,2,02C,1,022,010,01E,03C,2,020,14,8,(-4,-3),0
*0006F,20,lco
2,14,04B,030,1,028,016,024,012,020,01E,02C,01A,2,030,
14,8,(-4,-3),0
*00070,22,lcp
2,14,04B,02C,1,064,2,01C,1,012,020,01E,02C,01A,038,2,060,
14,8,(-4,-5),0,
*00071,22,lcq
2,14,04B,04F,1,064,2,01C,1,016,028,01A,02C,01E,030,2,020,
14,8,(-4,-5),0,
*00072,19,lcr
2,14,04B,1,044,2,02C,1,022,010,01E,2,020,03C,14,8,(-4,-3),0
*00073,18,lcs
2,14,04B,1,030,012,016,028,016,012,030,2,04D,14,8,(-4,-3),0
*00074,21,lct
2,14,8,(-2,-6),044,1,040,2,026,1,05C,01E,012,2,02F,14,8,(-4,-3),0
*00075,20,lcu
2,14,04B,044,1,03C,01E,010,022,2,024,1,04C,2,020,14,8,(-4,-3),0
*00076,14,lcu

2, 14, 04B, 044, 1, 04D, 043, 2, 04D, 14, 8, (-4, -3), 0
*00077, 23, lcw
2, 14, 04B, 044, 1, 9, (1, -4), (1, 4), (1, -4), (1, 4), (0, 0), 2, 04D,
14, 8, (-4, -3), 0
*00078, 16, lcx
2, 14, 04B, 1, 042, 2, 048, 1, 04E, 2, 020, 14, 8, (-4, -3), 0
*00079, 19, lcy
2, 14, 04B, 044, 1, 04D, 2, 043, 1, 06B, 018, 2, 024, 060, 14, 8, (-4, -5), 0
*0007A, 15, lcz
2, 14, 04B, 044, 1, 040, 04A, 040, 2, 020, 14, 8, (-4, -3), 0
*0007B, 19, klbr
2, 14, 8, (-1, -6), 064, 020, 1, 01A, 01C, 01A, 01E, 01C, 01E, 2, 020, 14, 03A, 0
*0007C, 13, kvbar
2, 14, 06C, 1, 064, 2, 06C, 020, 14, 8, (-2, -3), 0
*0007D, 18, krbr
2, 14, 8, (-1, -6), 1, 012, 014, 012, 016, 014, 016, 2, 06C, 040, 14, 03A, 0
*0007E, 15, ktlde
2, 14, 04B, 034, 1, 012, 02F, 012, 2, 04D, 14, 8, (-4, -2), 0
*00080, 4, keuroRef
7, 020AC, 0
*000A0, 7, NoBrkSpc
2, 060, 14, 8, (-6, -8), 0
*000A1, 18, kiexc
2, 14, 06C, 1, 044, 2, 014, 1, 014, 2, 8, (2, -6), 14, 8, (-2, -3), 0
*000A2, 23, kcent
2, 14, 8, (-2, -5), 01E, 1, 8, (2, 6), 2, 01E, 1, 038, 01A, 02C, 01E, 030, 2, 020,
14, 04A, 0,
*000A3, 23, kpound
2, 14, 8, (-2, -6), 040, 1, 048, 012, 044, 012, 01E, 2, 02B, 1, 028, 2, 06F,
14, 8, (-4, -3), 0
*000A5, 34, kyen
2, 14, 8, (-2, -6), 064, 1, 8, (2, -3), 03C, 2, 025, 1, 020, 2, 027, 1, 020, 2, 018,
1, 8, (2, 3), 2, 8, (2, -6), 14, 8, (-4, -3), 0
*000A7, 45, kpar
2, 14, 3, 2, 14, 8, (-3, -12), 14, 4, 2, 014, 1, 01E, 010, 012, 016, 018, 016, 012,
2, 021, 1, 016, 018, 01A, 01E, 010, 01E, 01A, 2, 8, (3, -2), 14, 3, 2,
14, 8, (-7, -6), 14, 4, 2, 0
*000AA, 36, lcau
2, 14, 8, (-1, -6), 2, 3, 2, 8, 3, 9, 1, 01A, 018, 016, 024, 012, 010, 01E, 02C, 01E,
2, 049, 1, 040, 2, 4, 2, 8, 2, -3, 14, 8, (-3, 1), 0
*000AB, 21, kfrew
2, 14, 8, (-2, -5), 021, 1, 026, 022, 2, 020, 1, 02A, 02E, 2, 02F, 14, 8, (-4, -2), 0
*000B0, 19, kdeg
2, 14, 8, (-1, -6), 054, 1, 012, 01E, 01A, 016, 2, 05C, 040, 14, 8, (-3, 2), 0
*000B1, 23, kpls-min
2, 14, 8, (-2, -6), 014, 1, 040, 2, 027, 1, 044, 2, 02A, 1, 040, 2, 04D,
14, 8, (-4, -2), 0
*000B5, 24, kmicro
2, 14, 04B, 02C, 1, 8, (1, 6), 1, 03C, 01E, 010, 023, 2, 024, 1, 04C, 2, 020,
14, 8, (-4, -5), 0

*000BA, 35, lcou
 2, 14, 8, (-1, -6), 3, 2, 2, 8, 3, 12, 1, 028, 01A, 02C, 01E, 020, 012, 024, 016, 2,
 06B, 1, 040, 2, 4, 2, 8, 2, -3, 14, 8, (-3, 1), 0
 *000BB, 22, kffrw
 2, 14, 8, (-2, -5), 014, 1, 022, 026, 2, 020, 1, 02E, 02A, 2, 040, 01C,
 14, 8, (-4, -2), 0
 *000BC, 41, kquart
 2, 3, 2, 14, 8, (-5, -12), 1, 8, (10, 12), 2, 8, (-8, -6), 1, 064, 01A, 2, 05C, 1,
 020, 2, 8, (6, -4), 1, 048, 8, (3, 4), 06C, 2, 060, 14, 8, (-9, -6), 4, 2, 0
 *000BD, 45, khalf
 2, 3, 2, 14, 8, (-5, -12), 1, 8, (10, 12), 2, 8, (-8, -6), 1, 064, 01A, 2, 05C, 1,
 020, 2, 8, (3, -1), 1, 012, 020, 01E, 01C, 01A, 028, 01A, 02C, 040, 2, 040,
 14, 8, (-9, -6), 4, 2, 0
 *000BF, 32, kiqm
 2, 3, 2, 14, 8, (-3, -12), 8, (6, 2), 1, 02A, 028, 026, 024, 022, 024, 2, 024, 1,
 024, 2, 8, (8, -12), 14, 8, (-7, -6), 4, 2, 0
 *000C0, 31, uc^
 2, 14, 8, (-2, -6), 1, 024, 022, 02E, 02C, 2, 8, (-4, 1), 1, 040, 2, 8, (-2, 4), 1,
 027, 2, 8, (6, -6), 14, 8, (-4, -3), 0
 *000C1, 31, uc^
 2, 14, 8, (-2, -6), 1, 024, 022, 02E, 02C, 2, 8, (-4, 1), 1, 040, 2, 8, (-2, 4), 1,
 021, 2, 8, (2, -6), 14, 8, (-4, -3), 0
 *000C2, 32, uc^
 2, 14, 8, (-2, -6), 1, 024, 022, 02E, 02C, 2, 8, (-4, 1), 1, 040, 2, 8, (-4, 3), 1,
 022, 02E, 2, 8, (2, -4), 14, 8, (-4, -3), 0
 *000C3, 33, uc^
 2, 14, 8, (-2, -6), 1, 024, 022, 02E, 02C, 2, 8, (-4, 1), 1, 040, 2, 8, (-4, 4), 1,
 012, 02F, 012, 2, 8, (2, -6), 14, 8, (-4, -3), 0
 *000C4, 32, uc,,
 2, 14, 8, (-2, -6), 1, 024, 043, 2, 029, 1, 014, 2, 040, 1, 01C, 2, 027, 1, 04D, 02C,
 2, 047, 1, 040, 2, 02E, 14, 8, (-4, -3), 0
 *000C5, 25, uc^
 2, 14, 8, (-2, -6), 1, 024, 032, 016, 01A, 03E, 02C, 2, 8, (-4, 1), 1, 040, 2, 02F,
 14, 8, (-4, -3), 0
 *000C6, 33, uc^
 2, 14, 8, (-2, -6), 1, 034, 8, (2, 3), 020, 2, 8, (-2, -3), 1, 020, 2, 03C, 1, 028,
 064, 2, 04B, 1, 020, 2, 04F, 14, 8, (-4, -3), 0
 *000C7, 29, uc‡
 2, 14, 8, (-2, -6), 02E, 1, 010, 014, 018, 014, 2, 021, 1, 01A, 028, 016, 044, 012,
 020, 01E, 2, 02E, 03C, 14, 8, (-4, -5), 0
 *000C8, 28, uc^
 2, 14, 8, (-2, -6), 1, 044, 040, 2, 016, 1, 027, 2, 04C, 018, 1, 020, 2, 02A, 1, 040,
 2, 020, 14, 8, (-4, -3), 0
 *000C9, 28, uc^
 2, 14, 8, (-2, -6), 1, 044, 040, 2, 025, 1, 029, 2, 03C, 018, 1, 020, 2, 02A, 1, 040,
 2, 020, 14, 8, (-4, -3), 0
 *000CA, 29, uc^
 2, 14, 8, (-2, -6), 1, 044, 040, 2, 016, 1, 016, 01A, 2, 03C, 018, 1, 020, 2, 02A, 1,
 040, 2, 020, 14, 8, (-4, -3), 0
 *000CB, 32, uc^

2, 14, 8, (-2, -6), 1, 044, 040, 2, 016, 1, 014, 2, 028, 1, 01C, 2, 03C, 018, 1, 020,
2, 02A, 1, 040, 2, 020, 14, 8, (-4, -3), 0
*000CC, 25, uc^
2, 14, 8, (-1, -6), 044, 1, 020, 2, 014, 1, 027, 2, 02D, 1, 04C, 2, 018, 1, 020, 2,
020, 14, 03A, 0
*000CD, 25, uc^
2, 14, 8, (-1, -6), 044, 1, 020, 2, 024, 1, 029, 2, 01E, 1, 04C, 2, 018, 1, 020, 2,
020, 14, 03A, 0
*000CE, 26, uc^
2, 14, 8, (-1, -6), 044, 1, 020, 2, 014, 1, 016, 01A, 2, 01E, 1, 04C, 2, 018, 1, 020,
2, 020, 14, 03A, 0
*000CF, 29, uc^
2, 14, 8, (-1, -6), 044, 1, 020, 2, 014, 1, 014, 2, 028, 1, 01C, 2, 01E, 1, 04C, 2,
018, 1, 020, 2, 020, 14, 03A, 0
*000D0, 25, uc
2, 14, 8, (-2, -6), 1, 064, 030, 01E, 04C, 01A, 038, 2, 024, 015, 1, 020, 2, 01D,
04F, 14, 8, (-4, -3), 0
*000D1, 25, uc
2, 14, 8, (-2, -6), 1, 044, 04E, 044, 2, 048, 014, 1, 012, 02F, 012, 2, 8, (2, -6),
14, 8, (-4, -3), 0
*000D2, 25, uc^
2, 14, 8, (-2, -6), 1, 044, 040, 2, 016, 1, 027, 2, 02C, 030, 1, 04C, 048, 2, 060,
14, 8, (-4, -3), 0
*000D3, 25, uc^
2, 14, 8, (-2, -6), 1, 044, 040, 2, 025, 1, 029, 2, 01C, 030, 1, 04C, 048, 2, 060,
14, 8, (-4, -3), 0
*000D4, 26, uc^
2, 14, 8, (-2, -6), 1, 044, 040, 2, 016, 1, 016, 01A, 2, 01C, 030, 1, 04C, 048, 2,
060, 14, 8, (-4, -3), 0
*000D5, 27, uc^
2, 14, 8, (-2, -6), 1, 044, 040, 2, 024, 1, 01A, 027, 01A, 2, 01C, 040, 1, 04C, 048,
2, 060, 14, 8, (-4, -3), 0
*000D6, 31, uc^
2, 14, 8, (-2, -6), 1, 044, 2, 012, 1, 014, 2, 02B, 1, 040, 2, 016, 1, 014, 2, 02D, 1,
04C, 048, 2, 060, 14, 8, (-4, -3), 0
*000D8, 29, ucd"
2, 14, 8, (-2, -6), 1, 8, (4, 6), 2, 018, 1, 01E, 04C, 01A, 028, 016, 044, 012, 020,
2, 8, (3, -6), 14, 8, (-4, -3), 0
*000D9, 24, uc^
2, 14, 8, (-2, -6), 064, 1, 05C, 01E, 020, 012, 054, 2, 01A, 1, 027, 2, 050, 06C,
14, 8, (-4, -3), 0
*000DA, 24, uc^
2, 14, 8, (-2, -6), 064, 1, 05C, 01E, 020, 012, 054, 2, 018, 1, 029, 2, 050, 05C,
14, 8, (-4, -3), 0
*000DB, 25, uc^
2, 14, 8, (-2, -6), 064, 1, 05C, 01E, 020, 012, 054, 2, 01A, 1, 016, 01A, 2, 050,
05C, 14, 8, (-4, -3), 0
*000DC, 27, uc^
2, 14, 8, (-2, -6), 064, 1, 05C, 01E, 020, 012, 054, 2, 01A, 1, 014, 2, 028, 1, 01C,
2, 05E, 14, 8, (-4, -3), 0

*000DD, 25, uc^
2, 14, 8, (-2, -6), 044, 1, 02E, 02C, 2, 024, 1, 022, 2, 025, 1, 029, 2, 050, 05C,
14, 8, (-4, -3), 0
*000DE, 27, lc
2, 14, 8, (-2, -6), 02C, 1, 084, 2, 03C, 1, 012, 020, 01E, 02C, 01A, 028, 016, 2,
8, (6, -1), 14, 8, (-4, -5), 0
*000DF, 24, kgers
2, 14, 8, (-2, -6), 1, 012, 044, 012, 010, 01E, 01C, 01A, 01E, 01C, 01A, 018, 2,
040, 14, 8, (-4, -3), 0
*000E0, 39, lc...
2, 14, 8, (-2, -6), 020, 1, 018, 016, 024, 012, 010, 01E, 02C, 01A, 2, 012, 1, 01E,
2, 2, 3, 2, 8, (-3, 10), 1, 047, 2, 8, (11, -12), 4, 2, 14, 8, (-4, -3), 0
*000E1, 39, lc
2, 14, 8, (-2, -6), 020, 1, 018, 016, 024, 012, 010, 01E, 02C, 01A, 2, 012, 1, 01E,
2, 2, 3, 2, 8, (-3, 12), 1, 049, 2, 8, (11, -10), 4, 2, 14, 8, (-4, -3), 0
*000E2, 40, lc?
2, 14, 8, (-2, -6), 020, 1, 018, 016, 024, 012, 010, 01E, 02C, 01A, 2, 012, 1, 01E,
2, 2, 3, 2, 8, (-3, 10), 1, 026, 02A, 2, 8, (11, -10), 4, 2, 14, 8, (-4, -3), 0
*000E3, 40, lc?
2, 14, 8, (-2, -6), 020, 1, 018, 016, 024, 012, 010, 01E, 02C, 01A, 2, 012, 1, 01E,
2, 3, 2, 8, (-7, 10), 1, 012, 02F, 012, 2, 8, (7, -11), 4, 2, 14, 8, (-4, -3), 0
*000E4, 37, lc,,
2, 14, 8, (-2, -6), 020, 1, 018, 016, 024, 2, 034, 1, 01C, 2, 030, 1, 014, 2, 03A, 1,
012, 010, 01E, 02C, 01A, 2, 012, 1, 01E, 2, 020, 14, 8, (-4, -3), 0
*000E5, 38, lc†
2, 14, 8, (-2, -6), 3, 2, 8, (3, 8), 1, 022, 026, 02A, 02E, 2, 8, (3, -6), 4, 2, 1,
01A, 018, 016, 024, 012, 010, 01E, 02C, 01E, 2, 020, 14, 8, (-4, -3), 0
*000E6, 30, lc
2, 14, 04B, 021, 1, 01A, 016, 024, 012, 01E, 03C, 2, 034, 1, 012, 01E, 01C, 028, 2,
01C, 1, 01E, 010, 2, 020, 14, 8, (-4, -3), 0
*000E7, 24, lc‡
2, 14, 04B, 042, 1, 038, 01A, 02C, 01E, 030, 2, 028, 1, 01C, 010, 01C, 018, 2, 041,
14, 8, (-4, -5), 0
*000E8, 27, lc?
2, 14, 8, (-2, -6), 024, 1, 030, 012, 016, 028, 01A, 02C, 01E, 020, 2, 054, 1, 027,
2, 050, 06C, 14, 8, (-4, -3), 0
*000E9, 26, lc,
2, 14, 8, (-2, -6), 024, 1, 030, 012, 016, 028, 01A, 02C, 01E, 020, 2, 064, 1, 029,
2, 05E, 14, 8, (-4, -3), 0
*000EA, 27, lc^
2, 14, 8, (-2, -6), 024, 1, 030, 012, 016, 028, 01A, 02C, 01E, 020, 2, 054, 1, 016,
01A, 2, 05E, 14, 8, (-4, -3), 0
*000EB, 31, lc%
2, 14, 8, (-2, -6), 024, 1, 030, 012, 016, 028, 01A, 02C, 01E, 020, 2, 064, 010, 1,
01C, 2, 048, 1, 014, 2, 06E, 14, 8, (-4, -3), 0
*000EC, 18, lc_
2, 14, 8, (-1, -6), 010, 1, 044, 2, 025, 1, 02F, 2, 020, 05C, 14, 03A, 0
*000ED, 18, lc
2, 14, 8, (-1, -6), 010, 1, 044, 2, 016, 1, 021, 2, 020, 06C, 14, 03A, 0
*000EE, 19, lc?

2, 14, 8, (-1, -6), 010, 1, 044, 2, 016, 1, 012, 01E, 2, 020, 05C, 14, 03A, 0
*000EF, 22, lc<
2, 14, 8, (-1, -6), 010, 1, 044, 2, 016, 1, 014, 2, 020, 1, 01C, 2, 020, 05C,
14, 03A, 0
*000F0, 30, lc
2, 14, 8, (-2, -6), 8, (3, 4), 1, 028, 01A, 02C, 01E, 020, 012, 024, 036, 2, 01C, 1,
021, 2, 8, (3, -6), 14, 8, (-4, -3), 0
*000F1, 27, lc
2, 14, 8, (-2, -6), 1, 044, 2, 014, 1, 012, 02F, 012, 2, 04A, 1, 022, 010, 01E, 03C,
2, 020, 14, 8, (-4, -3), 0
*000F2, 27, lc•
2, 14, 8, (-2, -6), 030, 1, 028, 016, 024, 012, 020, 01E, 02C, 01A, 2, 054, 1, 027,
2, 050, 06C, 14, 8, (-4, -3), 0
*000F3, 26, lc
2, 14, 8, (-2, -6), 030, 1, 028, 016, 024, 012, 020, 01E, 02C, 01A, 2, 064, 1, 029,
2, 05E, 14, 8, (-4, -3), 0
*000F4, 27, lc"
2, 14, 8, (-2, -6), 030, 1, 028, 016, 024, 012, 020, 01E, 02C, 01A, 2, 054, 1, 016,
01A, 2, 05E, 14, 8, (-4, -3), 0
*000F5, 32, lc^
2, 14, 8, (-2, -6), 030, 1, 028, 016, 024, 012, 020, 01E, 02C, 01A, 2, 8, (-3, 5),
1, 012, 02F, 012, 2, 8, (2, -6), 14, 8, (-4, -3), 0
*000F6, 35, lc"
2, 14, 8, (-2, -6), 030, 1, 028, 016, 024, 2, 034, 1, 01C, 2, 040, 1, 014, 2,
8, (-4, -3), 1, 012, 020, 01E, 02C, 01A, 2, 030, 14, 8, (-4, -3), 0
*000F7, 23, kto
2, 14, 8, (-2, -5), 021, 1, 014, 2, 021, 1, 048, 2, 022, 1, 01C, 2, 04E,
14, 8, (-4, -2), 0
*000F8, 24, lcd"
2, 14, 04B, 010, 1, 020, 012, 024, 016, 028, 01A, 02C, 01E, 2, 018, 1, 042, 2, 04D,
14, 8, (-4, -3), 0
*000F9, 27, lc-
2, 14, 8, (-2, -6), 044, 1, 03C, 01E, 010, 022, 2, 038, 044, 1, 02F, 2, 01E, 1, 04C,
2, 020, 14, 8, (-4, -3), 0
*000FA, 26, lc
2, 14, 8, (-2, -6), 044, 1, 03C, 01E, 010, 022, 2, 036, 1, 021, 2, 02D, 1, 04C, 2,
020, 14, 8, (-4, -3), 0
*000FB, 27, lc-
2, 14, 8, (-2, -6), 044, 1, 03C, 01E, 010, 022, 2, 036, 1, 012, 01E, 2, 01E, 1, 04C,
2, 020, 14, 8, (-4, -3), 0
*000FC, 32, lc_
2, 14, 8, (-2, -6), 064, 010, 1, 01C, 2, 01A, 1, 03C, 01E, 010, 022, 2, 044, 018, 1,
01C, 2, 01E, 1, 04C, 2, 020, 14, 8, (-4, -3), 0
*000FD, 27, lc^
2, 14, 8, (-2, -6), 044, 1, 04D, 2, 8, (-1, 5), 1, 021, 2, 02D, 1, 06B, 018, 2, 024,
060, 14, 8, (-4, -3), 0
*000FE, 25, uc
2, 14, 8, (-2, -6), 1, 064, 2, 01E, 019, 1, 030, 01E, 01C, 01A, 038, 2, 01F, 01C,
050, 14, 8, (-4, -3), 0
*000FF, 30, lc~

2, 14, 8, (-2, -6), 044, 1, 04D, 2, 054, 018, 1, 014, 2, 020, 1, 01C, 2, 01E, 1, 06B, 018, 2, 024, 060, 14, 8, (-4, -5), 0
*00104, 26, c164
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*00105, 30, c165
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*00106, 28, c143
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*00107, 30, c134
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*0010E, 32, c210
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*0010F, 31, c212
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*00118, 28, c168
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*00119, 27, c169
2, 14, 04B, 024, 1, 030, 012, 016, 028, 01A, 02C, 01E, 020, 3, 2, 01A, 01E, 4, 2, 2, 014, 030, 14, 8, (-4, -3), 0
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*00147, 27, c213
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*00148, 29, c229
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*00150, 27, c138
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1, 024, 2, 07C, 050, 14, 8, (-4, -3), 0
*00158, 33, c252
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*0015A, 27, c151
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*0015B, 31, c152
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*00160, 30, c230
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*00161, 29, c231
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*00164, 28, c155
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*00165, 26, c156
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*0016F, 31, c133
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016, 01A, 01E, 2, 040, 05C, 14, 8, (-4, -3), 0
*00170, 28, c235
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*00171, 30, uue
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*0017C, 34, c190
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4, 4, 2, 8, (8, -11), 4, 2, 14, 8, (-4, -3), 0
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*0017E, 27, c167
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*00410, 21, ucra
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*00411, 24, ucrb
2, 14, 8, (-2, -6), 1, 064, 030, 01C, 014, 038, 03C, 030, 01E, 01C, 01A, 038, 2,
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*00412, 29, ucrc
2, 14, 8, (-2, -6), 1, 030, 012, 014, 016, 028, 2, 020, 1, 012, 014, 016, 038, 2,
010, 1, 06C, 2, 050, 14, 8, (-4, -3), 0
*00413, 17, ucrg
2, 14, 8, (-2, -6), 1, 064, 040, 01C, 2, 05C, 020, 14, 8, (-4, -3), 0
*00414, 23, ucrcd
2, 14, 8, (-2, -6), 01C, 1, 014, 050, 064, 028, 04B, 02C, 050, 01C, 2, 014, 020,
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*00415, 25, ucrc
2, 14, 8, (-2, -6), 1, 064, 040, 2, 048, 03C, 1, 020, 2, 028, 03C, 1, 040, 2, 020,
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*00416, 22, ucrc!
2, 14, 8, (-2, -6), 062, 2, 038, 1, 06C, 2, 038, 064, 1, 06E, 2, 020,
14, 8, (-6, -3), 0
*00417, 27, ucrc!
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01A, 2, 060, 05C, 14, 8, (-4, -3), 0
*00418, 20, ucrci
2, 14, 8, (-2, -6), 1, 042, 04C, 064, 2, 048, 1, 06C, 2, 060, 14, 8, (-4, -3), 0
*00419, 24, ucrcikr
2, 14, 8, (-2, -6), 1, 042, 04C, 064, 2, 018, 1, 028, 2, 018, 1, 06C, 2, 060,
14, 8, (-4, -3), 0
*0041A, 23, ucrck
2, 14, 8, (-2, -6), 1, 064, 2, 040, 1, 03A, 018, 2, 010, 1, 03E, 2, 020,
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*0041B, 17, ucrc1
2, 14, 8, (-2, -6), 1, 010, 063, 010, 06C, 2, 020, 14, 8, (-5, -3), 0
*0041C, 17, ucrcm
2, 14, 8, (-2, -6), 1, 064, 04D, 043, 06C, 2, 020, 14, 8, (-4, -3), 0

*0041D, 22, ucrn
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2, 14, 8, (-2, -6), 1, 064, 040, 06C, 2, 020, 14, 8, (-4, -3), 0
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2, 14, 8, (-2, -6), 1, 064, 030, 01E, 01C, 01A, 038, 2, 06F, 14, 8, (-4, -3), 0
*00421, 23, ucrs
2, 14, 8, (-2, -6), 040, 014, 1, 01A, 028, 016, 044, 012, 020, 01E, 2, 02E, 03C,
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2, 14, 8, (-2, -6), 064, 1, 040, 2, 028, 1, 06C, 2, 040, 14, 8, (-4, -3), 0
*00423, 23, ucru
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14, 8, (-4, -3), 0
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040, 06C, 14, 8, (-4, -3), 0
*00425, 22, ucrr
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*00427, 19, ucrch
2, 14, 8, (-2, -6), 064, 1, 03C, 01E, 030, 044, 06C, 2, 020, 14, 8, (-4, -3), 0
*00428, 21, ucrrsh
2, 14, 8, (-2, -6), 1, 064, 06C, 030, 044, 04C, 030, 064, 06C, 2, 020,
14, 8, (-6, -3), 0
*00429, 24, ucr!
2, 14, 8, (-2, -6), 1, 064, 06C, 030, 044, 04C, 030, 064, 06C, 010, 01C, 014, 2,
020, 14, 8, (-7, -3), 0
*0042A, 23, ucr'
2, 14, 8, (-2, -6), 054, 1, 014, 010, 06C, 030, 012, 014, 016, 038, 2, 060, 03C,
14, 8, (-5, -3), 0
*0042B, 24, ucrrs
2, 14, 8, (-2, -6), 1, 030, 012, 014, 016, 038, 03C, 064, 2, 050, 1, 06C, 2, 020,
14, 8, (-5, -3), 0
*0042C, 21, ucr]
2, 14, 8, (-2, -6), 1, 030, 012, 014, 016, 038, 03C, 064, 2, 060, 06C,
14, 8, (-4, -3), 0
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*0042E, 26, ucr!
2, 14, 8, (-2, -6), 1, 064, 03C, 010, 024, 012, 010, 01E, 04C, 01A, 018, 016, 024,
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*0042F, 22, ucrrya
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2, 14, 8, (-2, -6), 014, 1, 024, 012, 020, 01E, 014, 04C, 014, 01A, 028, 016, 2,
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*00431, 22, lcrb
2, 14, 8, (-2, -6), 044, 030, 1, 038, 04C, 030, 012, 016, 038, 2, 02C, 060,
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2, 14, 8, (-2, -6), 1, 044, 030, 2, 04C, 020, 14, 8, (-3, -3), 0
*00434, 24, lcrd
2, 14, 8, (-2, -6), 01C, 1, 014, 010, 034, 012, 010, 04C, 028, 030, 01C, 2, 014,
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*00435, 20, lcre
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14, 8, (-4, -3), 0
*00436, 23, lcrq
2, 14, 8, (-2, -6), 1, 042, 2, 048, 1, 04E, 2, 028, 1, 044, 2, 040, 04C,
14, 8, (-4, -3), 0
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2, 14, 8, (-2, -6), 1, 044, 02C, 020, 022, 02A, 02E, 2, 020, 14, 8, (-4, -3), 0
*0043B, 16, lcr1
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*0043C, 17, lcrm
2, 14, 8, (-2, -6), 1, 044, 02E, 022, 04C, 2, 020, 14, 8, (-4, -3), 0
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2, 14, 8, (-2, -6), 1, 044, 02C, 040, 024, 04C, 2, 020, 14, 8, (-4, -3), 0
*0043E, 25, lcro
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2, 14, 8, (-2, -6), 1, 044, 040, 04C, 2, 020, 14, 8, (-4, -3), 0
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2, 14, 8, (-2, -6), 1, 044, 030, 01E, 01C, 01A, 038, 2, 060, 01C, 14, 8, (-4, -3), 0
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*00443, 22, lcrq

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2, 14, 8, (-2, -6), 020, 1, 044, 018, 01A, 01C, 01E, 020, 012, 014, 016, 018, 2,
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*00447, 18, lcrch
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2, 14, 8, (-2, -6), 1, 044, 04C, 020, 024, 02C, 020, 044, 2, 04C, 020,
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*00449, 24, lcrshch
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*0044C, 19, lcrmznak
2, 14, 8, (-2, -6), 1, 044, 02C, 020, 01E, 01A, 028, 2, 050, 14, 8, (-3, -3), 0
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*0044E, 26, lcryu
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*0044F, 22, lcrya
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7, 0020AC, 0
*020A7, 32, kpes
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2, 010, 03D, 03C, 14, 8, (-4, -3), 0
*0221E, 18, kinfin

2,14,04B,034,1,01E,022,01E,01A,026,01A,2,06F,14,8,(-4,-1),0
*02264,20,kleq
2,14,8,(-2,-6),014,1,040,2,054,1,049,04F,2,02E,14,8,(-4,-2),0
*02302,16,ktri
2,14,04B,1,024,022,02E,02C,048,2,060,14,8,(-4,-3),0

[AutoCAD 2008](#) > .> .> .>



256 ASCII AutoCAD

```
*BIGFONT nchars,nranges,b1,e1,b2,e2,...
```

nchars Kanji 90-AF E0-FF
Kanji

```
*BIGFONT 4000,2,090,0AF,0E0,0FF
```

*BIGFONT 65535 AutoCAD

[AutoCAD 2008](#) > .> .> .>



Kanji 0

```
*0,5,font-name
character-height, 0,modes,character-width,0
.
.
.
*shape-number,defbytes,shape-name
.
code,0,primitive#,basepoint-x,basepoint-y,width,height,
.
.
code,0,primitive#,basepoint-x,basepoint-y,width,height,
.
terminator
```

character height

character width

character-height	character-width
Kanji	

modes 0 2 00E (14)

modes 2

shape-number

defbytes

shape-name

code

7

primitive#

2

basepoint-x

X

basepoint-y

Y

terminator

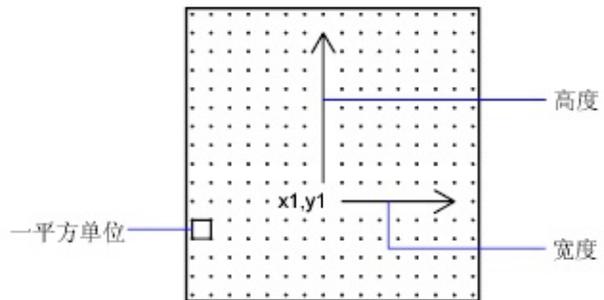
0

AutoCAD 65535

	xxxx	2	
	7,0	2	
<i>primitive#</i>	xxxx	2	

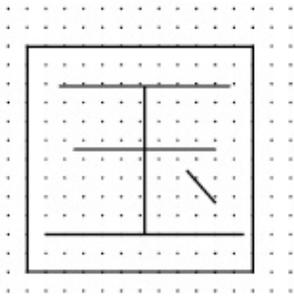
x		1	X
y		1	Y
		1	
		1	
	0	1	

16 x 16 Kanji

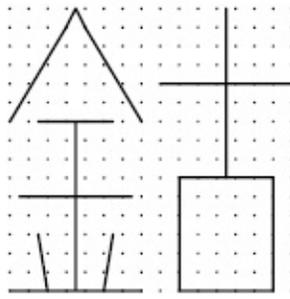


Kanji $M \times N$

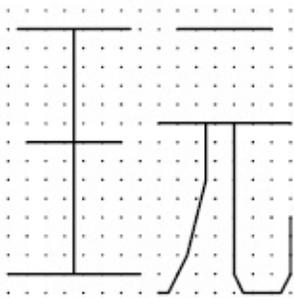
8D91



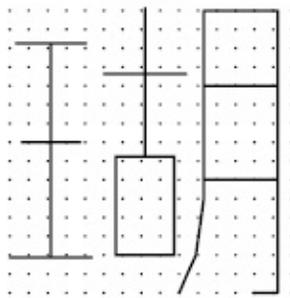
8CD8



8ADF



8CE8



Kanji

89A4



8BCA



8BE0



8C8E



8CB3



8CC3



8CFB



*BIGFONT 50,1,080,09e
*0,5,Extended Font
15,0,2,15,0
*08D91,31,unspecified
2,0e,8,-7,-15,

7,0,08cfb,0,0,16,16,7,0,08bca,2,3,12,9,
2,8,18,0,2,0e,8,-11,-3,0
*08D91,31,unspecified
2,0e,8,-7,-15,
7,0,08be0,0,0,8,16,7,0,08cc3,8,0,8,16,
2,8,18,0,2,0e,8,-11,-3,0
*08D91,31,unspecified
2,0e,8,-7,-15,
7,0,089a4,0,0,8,16,7,0,08cb3,8,0,8,16,
2,8,18,0,2,0e,8,-11,-3,0
*08D91,31,unspecified
2,0e,8,-7,-15,
7,0,089a4,0,1,5,14,7,0,08cc3,5,2,5,14,7,0,08c8e,9,0,7,
16,2,8,18,0,2,0e,8,-11,-3,0
*089A4,39,primitive
2,0e,8,-7,-15,2,8,1,14,1,0c0,
2,8,-11,-6,1,0a0,2,8,-12,-7,1,
0e0,2,8,-7,13,1,0dc,2,8,11,-1,
2,0e,8,-11,-3,0
*08BCA,41,primitive
2,0e,8,-7,-15,2,8,1,14,1,0c0,
2,8,-11,-6,1,0a0,2,8,-12,-8,1,
0e0,2,0e5,1,0ec,2,063,1,8,
2,-3,2,06f,2,0e,8,-11,-3,0
*08BE0,81,primitive
2,0e,8,-7,-15,2,8,3,9,1,080,
2,8,-10,-4,1,0c0,2,8,-13,-5,1,
0e0,2,8,-7,9,1,09c,2,8,-1,14,
1,8,-6,-5,2,8,8,5,1,8,6,-5,
2,8,-11,-6,1,8,1,-3,2,8,7,3,
1,8,-1,-3,2,8,-3,15,1,01a,2,
012,1,01e,2,8,10,-14,2,0e,8,
-11,-3,0
*08C8E,44,primitive
2,0e,8,-7,-15,2,8,3,15,1,090,0fc,038,
2,8,-6,11,1,090,2,8,-9,-5,1,
090,2,096,1,0ac,8,-1,-3,01a,01a,2,8,
18,0,2,0e,8,-11,-3,0
*08CB3,61,primitive
2,0e,8,-7,-15,2,042,1,02b,02a,018,2,
0d0,1,012,034,2,069,1,01e,040,2,8,
-8,6,1,02b,2,8,4,5,1,08c,2,8,
-3,8,1,03c,2,8,-5,3,1,0e0,2,8,
-12,5,1,0a0,2,8,6,-14,2,0e,8,
-11,-3,0
*08CC3,34,primitive
2,0e,8,-7,-15,2,0c1,1,06c,0a8,064,0a0,2,8,
-5,9,1,09c,2,8,-7,5,1,0e0,2,8,
4,-11,2,0e,8,-11,-3,0
*08CFB,22,primitive

2, 0e, 8, -7, -15, 2, 0d2, 1, 0cc, 0c8, 0c4, 0c0, 2, 8,
5, -13, 2, 0e, 8, -11, -3, 0



[AutoCAD 2008](#) > .> .> .>



STYLE ASCII STYLE “”
“”

:- style

[?]< > style_name

TTF SHX txt,greek

AutoCAD

AutoCAD

<i>normal,big</i>	
<i>normal,</i>	
<i>,big</i>	
<i>normal</i>	
ENTER	

STYLE AutoCAD ,greek

AutoCAD



[AutoCAD 2008](#) > .> .> .>



AutoCAD

- 255
- 1 911 31130 255
-
- **%%nnn nnn**

(~) (|) ASCII 124 124 124 x 256
31744

```
*BIGFONT 60,1,124,124
*0,4,Greek
above, below, modes, 0
*31809,n,uca
. . . uppercase Alpha definition, invoked by "|A"
*31810,n,ucb
. . . uppercase Beta definition, invoked by "|B"
*31841,n,lca
. . . lowercase Alpha definition, invoked by "|a"
*31842,n,lcb
. . . lowercase Beta definition, invoked by "|b"
*31868,n,vbar
. . . vertical bar definition, invoked by "||"
. .
```

Unicode



Unicode Unicode Unicode AutoCAD

```
*UNIFONT,6,font-name  
above,below,modes,encoding,type,0
```

font-nameabovebelow modes

encoding

0 Unicode

1 1

2

0

1

2

7 7 7 (*defbytes*) “romans.shp”

```
*00080,4,keuroRef  
7,020AC,0
```

Unicode SHP 255

Unifont AutoCAD Unifont

\U+



[AutoCAD 2008](#) > . > . >

SHX



AutoCAD SHX

“”“”



[AutoCAD 2008](#) > . > . > [SHX](#) >

SHX



AutoCAD AutoCAD ROMANS super_onsuper_off
sub_on sub_off[]{ }ASCII 128 256
%% *nnn* *nnn* ASCII

1. ASCII SHP

2.

ASCII 91 93 Unicode 05B 05D ASCII
123 125 07B 07D

3. 2

```
*UNIFONT,6,Extended Simplex Roman for UNICODE  
21,7,2,0 21 + 7 = 28 28 / 2 = 14
```

4. SHP

```
*91,8,super_on  
2,8,(0,14),003,2,1,0  
*93,8,super_off  
2,004,2,8,(0,-14),1,0  
*123,8,sub_on  
2,8,(0,-14),003,2,1,0  
*125,8,sub_off  
2,004,2,8,(0,14),1,0
```

14 -14 Y 14

5.

6. COMPILE SHP

{ } [] { }



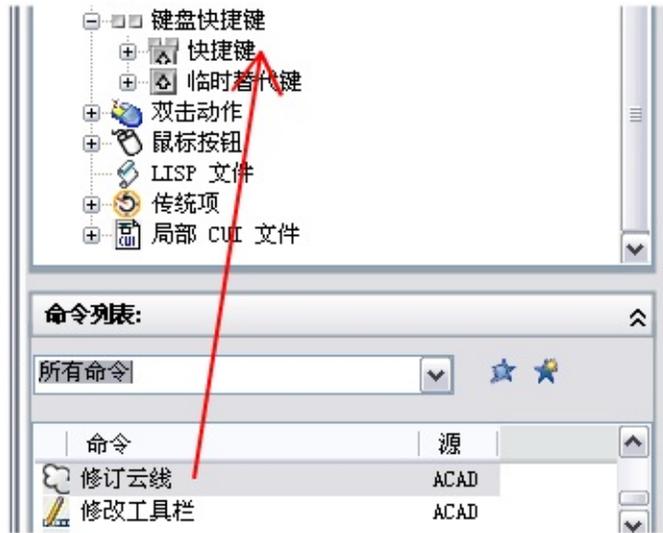


1. “” ➤ “”
 2. “”“”“” (+)“”
 3. F2 CTRL+C
 4. “”“”“”
 5. “” ➤ “”
 6. “”“”
 7. **“Templates”**
 8. CTRL+V “”“”
“” Template
-
-

AutoCAD 2008 > . > . >



1. “” > “” > “”
2. “”“”“” (+)
3. “” (+)
4. “”“ <> ”“”



“”

5. “”“ ... ”“”

基本	
名称	修订云线
命令	
说明	创建连续圆弧的多段线构成云形
宏	^C^C_revcloud
访问	
键	
高级	
元素 ID	ID_Revcloud

6. “”“”



7. CTRL SHIFT ALT

- (F n)
- (NUMPAD n)
- CTRL+CTRL+CTRL+CTRL+
- CTRL+ALT+CTRL+Alt+CTRL+ALT+
CTRL+Alt+
- CTRL+SHIFT+CTRL+SHIFT+CTRL+SHIFT+
CTRL+SHIFT+
- CTRL+SHIFT+ALT+CTRL+SHIFT+ALT+
CTRL+SHIFT+ALT+CTRL+SHIFT+ALT+
Escape Insert Delete Home End Page Up
Page Down Escape
CTRL+SHIFT+ALT

“”“”

8. “”“”

9. “”“”



1. “” > “” > “”
2. “”“”“” (+)
3. “” (+)
- 4.



“”

5. “”“ ... ”“”

基本	
名称	修订云线
命令	
说明	创建连续圆弧的多段线构成云形
宏	^C^C_revcloud
访问	
键	CTRL+SHIFT+R
高级	
元素 ID	ID_Revcloud

6. CTRL SHIFT ALT

- (F n)
- (NUMPAD n)

- CTRL+CTRL+CTRL+CTRL+
- CTRL+ALT+CTRL+Alt+CTRL+ALT+CTRL+Alt+
- CTRL+SHIFT+CTRL+SHIFT+CTRL+SHIFT+CTRL+SHIFT+
- CTRL+SHIFT+ALT+CTRL+SHIFT+ALT+CTRL+SHIFT+ALT+CTRL+SHIFT+ALT+
Escape Insert Delete Home End Page Up
Page Down Escape
CTRL+SHIFT+ALT



“”“”

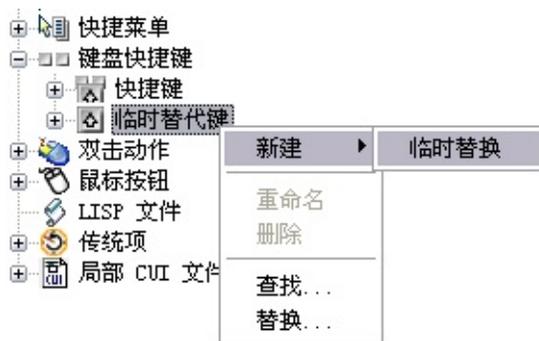
7. “”“”

8. “”“”





1. “” > “” > “”
2. “”“”“” (+)
3. “ <> ”“”“”



“”“1”

4.

- “1”
- “1”“”
- “1”

5. “”

- “”
- “”“ ... ”“”“”“”
F n SHIFT+ SHIFT+

- “1” $\wedge c \wedge c$
- “2”





1. “” > “” > “”
2. “”“”“” (+)
3. “” (+)
4. “ <> ”



5. “”

- “”
- “”“ ”“”“”“”
...
“”“”“”
- “ 1 ” ^c^c
- “ 2 ”

基本	
名称	切换正交模式
说明	切换正交模式
快捷方式	
键	SHIFT
宏 1 (按下键)	^P'_ orthomode \$M=\$(if,\$(and,\$(getvar,
宏 2 (松开键)	





1. “” “” “”

2. “ <> ”“”



3. “”

■ “”“”“”“”“”

■ “”“”“”“”“”“”

4. “”“”





1. “” > “” > “”
2. “”“”“” “<>”“”“”“”



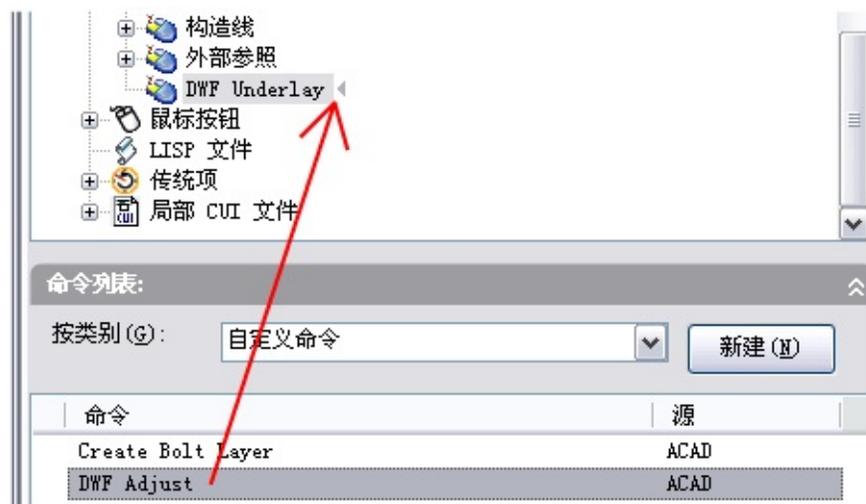
“”“DoubleClick1”

3.
 - “DoubleClick1”
 - “DoubleClick1”“”
 - “DoubleClick1”

4. “”
 - “”
 - “” DXF

基本	
名称	DoubleClick1
说明	
高级	
对象名称	
元素 ID	DCV_0001

5. “” “<>”



6. “”



“”

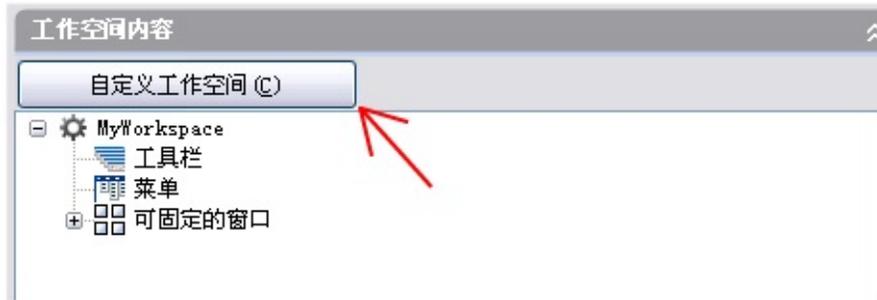
1. “” > “” > “”
2. “”“”“”“” <> ”“”“”“”



“”“1”

3.
 - “1”
 - “1”“”
 - “1”

4. “”“”



5. “ <> ” “ CUI ” (+)

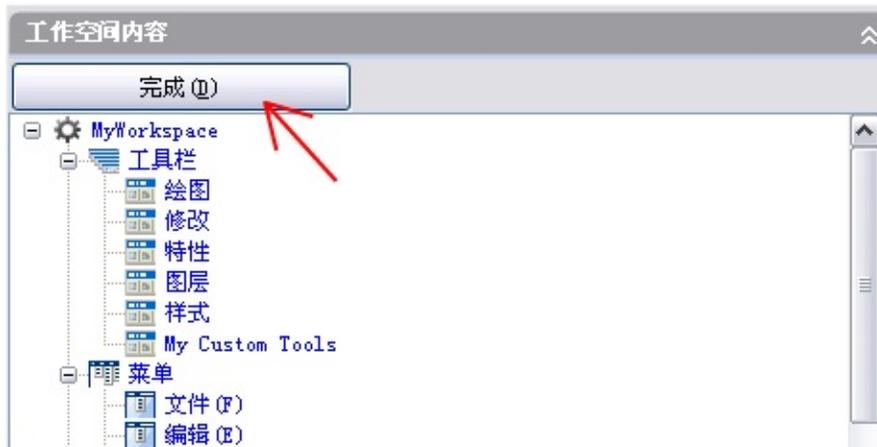
CUI

6. CUI



“ ”

7. “ ” “ ”



8. “”

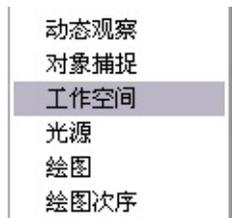
AutoCAD 2008 > .> .>



“”

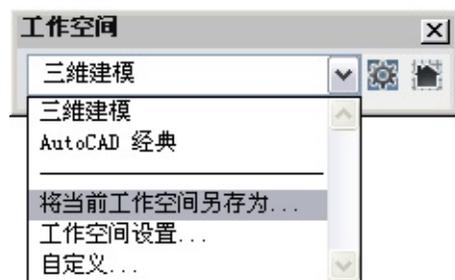
1. AutoCAD

2. “”

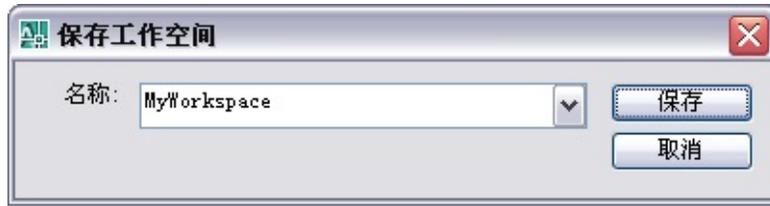


3.

4. “”“”



5. “”



6. “”

“”

“”“”

“”

▶ “”

▶ “”



AutoCAD 2008 > . > . >



1. “” > “” > “”
2. “”“”
3. “”“ <> ”



4. “”
 - “”
 - “”
 - “”“”“”“”
 - “”“”“”“”
 - “”“”“”“”
 - “”“”“”“”

基本	
名称	MyWorkspace
说明	
显示	
启动	模型
模型/布局选项卡	开
屏幕菜单	关
滚动条	关

5. “”



AutoCAD 2008 > . > . >



1. “” > “” > “”
2. “”“”“” “<>”“” (+)
- 3.



4. “”“”



5. “ <> ”“”“ CUI ” (+)
6. CUI



“”

7. “”“”



8. “”

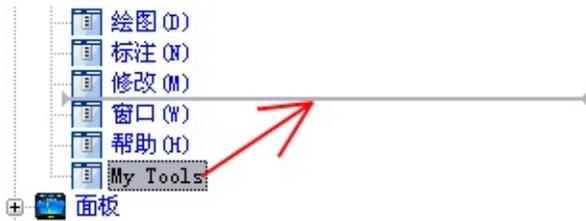
AutoCAD 2008 > . > . >



1. “” > “” > “”
2. “”“”“”“” <> “”“” (+)
- 3.



4. “”



- 5.
6. “”





AutoCAD 2008 > . > . >



1. “” > “” > “”
2. “”“”“” <> ”“” (+)
- 3.



4. “”“”



5. “ <> ”“”“ CUI ” (+)
6. CUI



“”

7. “”“”



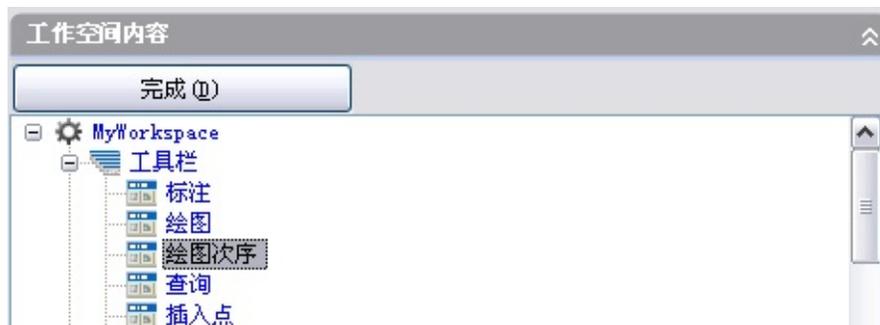
8. “”



- 1. “” > “” > “”
- 2. “”“”“” “<>”



- 3. “”“” (+)
- 4.



- 5. “”
 - “”“”“”“”“”“”“”“”“”
 - “”“”“ X ” 0
 - “”“”“ Y ” 0

■ “””””” 0

外观	
方向	右视
默认 X 位置	0
默认 Y 位置	0
行	1

6. “”

AutoCAD 2008 > . > . >



1. “” > “” > “”
2. “”“”“” “<>”“” (+)
- 3.



4. “”“”



5. “ <> ”“”“ CUI ” (+)
6. CUI



“”

7. “”“”



8. “”



“”

1. “” > “” > “”
2. “”“”“” <> “”“” (+)
- 3.
4. “”



- 5.
6. “”



1. “” > “” > “”
2. “”“”“” “<>”



3. “”“” (+)
- 4.



5. “”
■ “”“”“”“”“”

■ “”“”“”“”“”“”“”“”“”“”

■ “”“”“”“”“”

“”“”“”“”“”“”“”“”“”

“”

■ “”“”“”“”“”

■ “”“”“”“”“”

■ “”

■ “”“”

■ “”0 “”

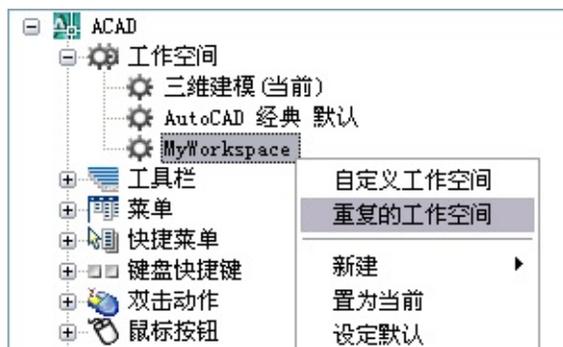
■ “”0 “”

☐ 外观	
显示	否
方向	浮动
允许固定	是
自动隐藏	关
使用透明	否
透明度	0
☐ 大小	
高度	590
宽度	284

6. “”



1. “” > “” > “”
2. “”“”“”“” <> ”“” (+)
3. “”



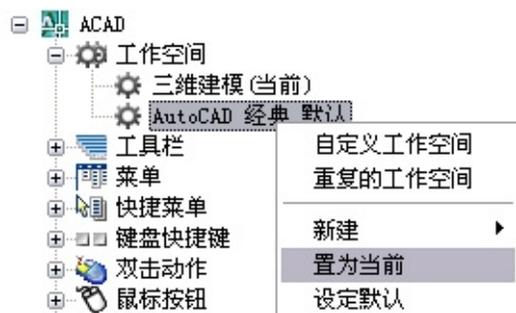
“”“” <>”

4.
 - “ <>”
 - “ <>”“”
 - “ <> ”
- 5.
6. “”





1. “” > “” > “”
2. “”“”“” (+)
3. “”



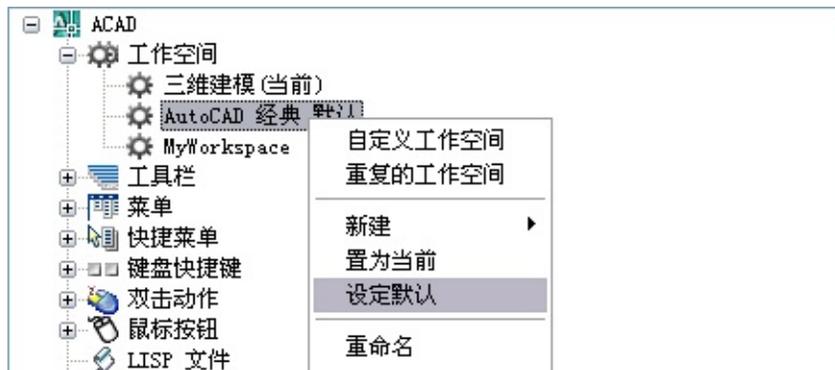
4. “”



AutoCAD 2008 > . > . >



1. “” > “” > “”
2. “”“”“” (+)
3. “”



4. “”

CUI CUI CUI AutoCAD

AutoCAD 2008 > . > . >



1. Windows “”



2. AutoCAD“”“”“”

“:\acad.exe”[“”] [“”]

“ **d:\AutoCAD 2008\acad.exe**” /w **“MyWorkspace”**



3. “”
