

# SHARP PC-1404G 測量計算プログラム

## 平行移動付き直線と円の交点計算

DEF A

2006/8/17

### 平行移動付き直線と円の交点計算

#### 入力

X1 器械点  
Y1 器械点  
X2 後視点  
Y2 後視点  
-W+ 移動幅  
RX 円中心座標  
RY 円中心座標  
R 円の半径

#### 出力

X 交点1  
Y 交点1  
X 交点2  
Y 交点2

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10:"A":REM LIN-CIR
50:REM
70:WAIT
80:PRINT "LIN-CIR"
90:INPUT "X1=";X1
100:INPUT "Y1=";Y1
120:INPUT "X2=";X2
130:INPUT "Y2=";Y2
150:IF Y2=0 LET Z1=DEG X
2:GOTO 200
160:DX=X2-X1;DY=Y2-Y1:L1
=√(SQU DX+SQU DY):Z1
=ASN (DY/(L1+ABS (L1
=0)))
170:AZ=(360+Z1)*ABS (DX>
=0)+(180-Z1)*ABS (DX
<0)
180:GOSUB 700
190:Z1=AZ:Z=DMS Z1
200:IF Y2<>0 THEN 220
210:IF Y2=0 LET Z=DMS Z1
220:USING "####.###":
PRINT "AZ1=";Z
230:IF Y2=0 THEN 250
235:USING "#####.###"
240:PRINT "L1=";MDF L1
260:INPUT "-W+=";W1
270:X6=X1+W1*COS (Z1+90)
280:Y6=Y1+W1*SIN (Z1+90)
290:X7=X2+W1*COS (Z1+90)
300:Y7=Y2+W1*SIN (Z1+90)
310:INPUT "RX=";RX
320:INPUT "RY=";RY
340:DX=RX-X6;DY=RY-Y6:L2
=√(SQU DX+SQU DY):Z2
=ASN (DY/(L2+ABS (L2
=0)))
350:AZ=(360+Z2)*ABS (DX>
=0)+(180-Z2)*ABS (DX
<0)
360:GOSUB 700
370:Z2=AZ:Z=DMS Z2
380:N2=Z2-Z1+360
390:IF N2>=360 LET N2=N2
-360:GOTO 390
400:Z=DMS N2
410:INPUT "R =" ;R1
420:L3=L2*COS N2
430:H=L2*SIN N2
440:L4=√(SQU R1-SQU H)
450:L=L4*2
460:AN=(ACS ((ABS H)/R1)
)*2
470:Z=DMS AN
480:X8=X6+(L3-L4)*COS Z1
490:Y8=Y6+(L3-L4)*SIN Z1
500:X=X6+(L3+L4)*COS Z1
510:Y=Y6+(L3+L4)*SIN Z1
520:REM
620:PRINT "X =" ;MDF X8
630:PRINT "Y =" ;MDF Y8
640:PRINT "X =" ;MDF X
650:PRINT "Y =" ;MDF Y
660:GOTO 50
670:END
700:IF AZ>=360 LET AZ=AZ
-360:GOTO 700
710:IF AZ<0 LET AZ=AZ+36
0:GOTO 710
720:RETURN
    
```