

```

200 IF V<1 GO TO 130 \ IF V>9 GO TO 130 \ C3(1)=V \ C3$="*" \ GO TO 110
210 IF D$<>"CP" GO TO 230
220 IF V<.2 GO TO 130 \ IF V>.2 GO TO 130 \ C4(1)=V \ C4$="*" \ GO TO 110
230 IF D$<>"RA" GO TO 250
240 IF V<.22 GO TO 130 \ IF V>.4 GO TO 130 \ R1(1)=V \ R1$="*" \ GO TO 110
250 IF D$<>"RC" GO TO 270
260 IF V<.02 GO TO 130 \ IF V>.2 GO TO 130 \ R2(1)=V \ R2$="*" \ GO TO 110
270 IF D$<>"RV" GO TO 290
280 IF V<.02 GO TO 130 \ IF V>.08 GO TO 130 \ R3(1)=V \ R3$="*" \ GO TO 110
290 IF D$<>"RP" GO TO 310
300 IF V<.01 GO TO 130 \ IF V>.25 GO TO 130 \ R4(1)=V \ R4$="*" \ GO TO 110
310 IF D$<>"HR" GO TO 330
320 IF V<50 GO TO 130 \ IF V>300 GO TO 130 \ H(1)=V \ H$="*" \ GO TO 110
330 IF D$<>"CC" GO TO 350
340 IF V<=.1 GO TO 130 \ IF V>1.7 GO TO 130 \ F(1)=V \ F$="*" \ GO TO 110
350 PRINT "INCORRECT ABBREVIATION" \ GO TO 110
360 PRINT #1,CHR$(12) \ I=1
370 REM CALCULATIONS
380 V3(I)=B(1) \ Q(I)=100 \ I2=0
390 REM VOLUME LOOP
400 P3(I)=V3(I)/C3(1) \ I3=0
410 REM RAP-FLOW LOOP
420 P5(9)=P5(I) \ P5(I)=P3(I)-Q(I)*R3(1) \ P5(I)=(P5(I)+P5(9))/2
430 P=P5(I) \ IF P>6 THEN P=6
440 IF P<.21 THEN P=.21
450 Q(I)=SQR((47*P-4.6*P*P-9.4)*H(I)*F(1)/(R1(I)+R2(1)+R3(1)))
460 I3=I3+1 \ IF I3>100 GO TO 1000
470 IF ABS(P5(I)/P5(9)-1)>.01 GO TO 410
480 REM END OF RAP-FLOW LOOP
490 P1(I)=Q(I)*(R1(I)+R2(1))+P3(I) \ V1(I)=P1(I)*C1(1)
500 P2(I)=Q(I)*R2(1)+P3(I) \ V2(I)=P2(I)*C2(1)
510 S(I)=Q(I)/H(I)
520 Z=P1(I)*S(I) \ P6(I)=(-.029*Z+1.76000E-03*Z*Z+3.25)/F(1)
530 P4(I)=Q(I)*R4(1)+P6(I)
540 V4(I)=P6(I)*C4(1) \ V3(9)=V3(I) \ V3(I)=B(1)-V1(I)-V2(I)-V4(I)
550 I2=I2+1 \ IF I2>100 GO TO 1000
560 IF ABS(V3(I)/V3(9)-1)<.01 THEN PRINT \ GO TO 580
570 V3(I)=(V3(I)+V3(9))/2 \ GO TO 390
580 IF I=2 GO TO 610 \ I=2
590 REM BAROREFLEX CALCULATION
600 R1(2)=R1(1)+(.6-5.00000E-03*P1(1)) \ H(2)=H(1)+(36-.315*P1(1)) \ GO TO 370
610 REM PRINT VALUES FOR RUN
620 PRINT #1,TAB(39);"WITHOUT and WITH BAROREFLEX"
630 PRINT #1,"SEMI-INDEPENDENT VARIABLES" \ PRINT #1
640 Z$(1)="LLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLL 'L = ###"
650 Z$(2)="LLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLL 'L = ###.#"
660 Z$(3)="LLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLL 'L = ##.##"
670 Z$(4)="LLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLL 'L = ##.###"
680 Z$(5)="LLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLL 'L = ##.####"
690 PRINT #1,USING Z$(1),"1. BLOOD VOLUME ml/kg",B$,B(1)
700 PRINT #1,"2. COMPLIANCES ml/kg.mm Hg"
710 PRINT #1,USING Z$(4)," Arterial",C1$,C1(1)
720 PRINT #1,USING Z$(3)," Capillary",C2$,C2(1)
730 PRINT #1,USING Z$(2)," Venous",C3$,C3(1)
740 PRINT #1,USING Z$(3)," Pulmonary",C4$,C4(1)
750 PRINT #1,"3. RESISTANCES mm Hg.kg.min/ml"
760 PRINT #1,USING Z$(4)," Arteriolar",R1$,R1(1),R1(2)
770 PRINT #1,USING Z$(5)," Post-capillary",R2$,R2(1)
780 PRINT #1,USING Z$(5)," Post-venous",R3$,R3(1)
790 PRINT #1,USING Z$(5)," Pulmonary",R4$,R4(1)
800 PRINT #1,"4. HEART"
810 PRINT #1,USING Z$(1)," Heart rate / min",H$,H(1),H(2)
820 PRINT #1,USING Z$(3)," Contractility normal=1",F$,F(1)
830 PRINT #1 \ PRINT #1,"DEPENDENT VARIABLES" \ PRINT #1
840 PRINT #1,"1. FLOWS ml/kg.min"
850 PRINT #1,USING Z$(1)," Cardiac output",Z$,Q(1),Q(2)
860 PRINT #1,USING Z$(3)," Stroke volume",Z$,S(1),S(2)
870 PRINT #1,"2. PRESSURES mm Hg"
880 PRINT #1,USING Z$(1)," Arterial",Z$,P1(1),P1(2)
890 PRINT #1,USING Z$(2)," Capillary",Z$,P2(1),P2(2)
900 PRINT #1,USING Z$(2)," Venous",Z$,P3(1),P3(2)
910 PRINT #1,USING Z$(2)," Pulm. Art.",Z$,P4(1),P4(2)
920 PRINT #1,USING Z$(2)," Right Atrial",Z$,P5(1),P5(2)
930 PRINT #1,USING Z$(2)," Left Atrial",Z$,P6(1),P6(2)
940 PRINT #1,"3. VOLUMES ml/kg"
950 PRINT #1,USING Z$(2)," Arterial",Z$,V1(1),V1(2)
960 PRINT #1,USING Z$(2)," Capillary",Z$,V2(1),V2(2)
970 PRINT #1,USING Z$(2)," Venous",Z$,V3(1),V3(2)
980 PRINT #1,USING Z$(2)," Pulmonary",Z$,V4(1),V4(2)
990 PRINT "MORE CHANGES (Y) "; \ INPUT A$ \ IF A$="Y" GO TO 100 \ GO TO 1010
1000 PRINT "THIS COMBINATION OF VALUES RESULTS IN DEATH"
1010 END

```

## ARTHRITIS FOUNDATION

The Arthritis Foundation offers a limited number of fellowship awards and research grants for men and women in the medical sciences and clinical disciplines related to arthritis. Applications for these awards must be received by September 1 for postdoctoral and senior fellowships; and by November 1 for Allied Health Professionals fellowships and grants. To obtain an application form, write to:

Research Department  
Arthritis Foundation  
3400 Peachtree Rd., NE  
Atlanta, Georgia 30326

These applications will be for awards which commence July 1, 1981.