

```

#COMPILE EXE
#DIM ALL
REM *** flow in triangular duct with A=12.566 cm^2
GLOBAL i,j,jj,dx,iter,visc,dpdz,sum,vbar,zz AS SINGLE
FUNCTION PBMAIN
DIM v(61,61) AS SINGLE
visc=0.02:dpdz=-0.4:dx=0.08355
100 REM *** continue
jj=59
FOR j=2 TO 59
FOR i=2 TO jj
v(i,j)=1/4*(v(i+1,j)+v(i-1,j)+v(i,j+1)+v(i,j-1))-dx^2/visc*dpdz)
NEXT i:jj=jj-1
NEXT j
iter=iter+1
PRINT iter,v(21,21)
IF iter<2000 THEN 100 ELSE 200
200 REM *** continue
OPEN "c:TRIduct.dat" FOR OUTPUT AS #1
jj=61
FOR j=1 TO 61
FOR i=1 TO jj
WRITE#1,i,j,v(i,j)
sum=sum+v(i,j)*dx^2
NEXT i:jj=jj-1
NEXT j
vbar=sum/12.566
PRINT "average velocity is: ";vbar
INPUT "Shall we continue?";zz
IF zz>0 THEN CLOSE
END
END FUNCTION

```

