

## IIa.8.6

c This program calculates final temperature for Example IIa.8.6

```

c
    implicit real*8(a-h,o-z)
    Data cv,cp,R/1321,1608,230.286/
    Data am1,am2/0.25,0.1/
10   continue
    i =0
    print *, 'Enter > am1, am2 (kg)'
    read(*,*) am1,am2
    Print *, 'Enter > P1 (Pa), T1 (C)'
    read(*,*) P1, T1
    T1=T1+273
    T2=(T1-10)+273
    u1=cv*T1
    V=am1*R*T1/P1
1   continue
    i=i+1
    Te=(T1+T2)/2
    he=cp*Te
    term=(am2-am1)*he+am1*u1
    u2=term/am2
    T2n=u2/cp
    eps=abs((T2n-T2)/T2)
    if(eps.le.1.E-6) go to 2
    T2=T2n
    if(i.gt.200) go to 2
    go to 1
2   continue
    P2=am2*R*T2/V
    T1=T1-273
    T2=T2-273
    write(*,3) i,am1,am2,T1,T2,P1,P2,V
3   format(i4,2f6.2,2f9.2,2e9.2,f9.2)
    go to 10
    stop
end

```