
```
function [T] = var_cp(T1,P2_over_P1)

R = 286.9;
target=R.*log(P2_over_P1);

T2=T1;
dT=0.01;
cp_int=[0 0];
for i=1:2
    while (cp_int(i) < target(i))
        T2(i) = T2(i) + dT;
        dcp_int = sp_heats(T2(i))*(dT/T2(i));
        cp_int(i) = cp_int(i) + dcp_int;
    end
end

T = T2;
end
```

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