Question 3 - Calculation

main

```
clear all; close all; clc

% Non-linear system
R = 287.05;   % gas constant [J/kg-K]
Cp = 1004.675;  % Cp constant [J/kg-K]
syms u T P
eqn1 = 26875 - P*u/T;
eqn2 = 659136.039 - 4*P - 4*P*u^2/R/T;
eqn3 = 5.32118*10^10 - 4*Cp*P*u - 2*P*u^3/T;

soln = solve(eqn1, eqn2, eqn3);
ans = struct2table(soln)
```

ans = 2×3 table

	P	T	u
1	1×1 sym	1×1 sym	1×1 sym
2	1×1 sym	1×1 sym	1×1 sym

```
ans = table2array(ans);
ans = vpa(ans, 10);
disp(ans);
```

$$\begin{pmatrix} 156940.9128 & 489.1976513 & 83.77157137 \\ -19620.90467 & -1437.97761 & 1969.616025 \end{pmatrix}$$