```matlab
% CPE 3102 - FEEDBACK AND CONTROL SYSTEMS
% Group 3        TTh 10:30 AM - 1:30 PM LB285 TC
% Team 5: Cabigon, Timothy Chad; Sarcol, Joshua        BS-CpE 3
2025/10/04
% LE3 | Time Response - First-Order System

clear
clc
format bank                        % 2 decimal places display

% Table 1 value generation
K1 = 1:10;                         % values of K
popTable(K1)

% Table 2 value verification
K2 = [27.5 74.07 220 133.33];      % values of K that were calculated by
hand
popTable(K2)

function popTable (K)
    Table = zeros([numel(K) 4]);   % variable for final results (array)

    for i = 1:length(K)            % for each K value
        indiv = stepinfo(tf(K(i), [1 K(i)]));
                                   % calculate each performance
specification
        Table(i, :) = [K(i) 1/K(i) indiv.RiseTime indiv.SettlingTime];
    end

    disp(array2table(Table, ...    % display results in a table
        VariableNames = {'K', 'Time Constant', 'Rise Time','Settling Time'}))
end
```

K	Time Constant	Rise Time	Settling Time
1.00	1.00	2.20	3.91
2.00	0.50	1.10	1.96
3.00	0.33	0.73	1.30
4.00	0.25	0.55	0.98
5.00	0.20	0.44	0.78
6.00	0.17	0.37	0.65
7.00	0.14	0.31	0.56
8.00	0.12	0.27	0.49
9.00	0.11	0.24	0.43
10.00	0.10	0.22	0.39

K	Time Constant	Rise Time	Settling Time
27.50	0.04	0.08	0.14
74.07	0.01	0.03	0.05
220.00	0.00	0.01	0.02

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  133.33           0.01              0.02              0.03
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