

```

Beta_arr = [0.25, 0.5, 1.0, 2.0, 3.0, 5.0, 10, 50, 100, 150, 200, 250];
Biot = 1.0;

for i = 1:length(Beta_arr)
    Beta = Beta_arr(i);
    N=120;
    delta = 1/(N-1);
    y = [1;zeros(N-1,1)];
    b = (1/delta^2)*ones(N-2, 1);
    a = [0;b];
    d = [1; -1*(2/(delta)^2 + Beta^2)*ones(N-2, 1)];

    Asol_numerical = Numerical_A(a, b, d, y, N);
    Bsol_numerical = Numerical_B(a, b, d, y, Biot, N);
    AB_percent_err = abs(Asol_numerical(N) - Bsol_numerical(N))*100/Asol_numerical(N);
    fprintf("Percent error in A and B for Beta = %f\n", Beta);
    disp(AB_percent_err);
end

```

```

Percent error in A and B for Beta = 0.250000
    49.4931

```

```

Percent error in A and B for Beta = 0.500000
    48.0555

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Percent error in A and B for Beta = 1.000000
    43.3117

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Percent error in A and B for Beta = 2.000000
    32.7022

```

```

Percent error in A and B for Beta = 3.000000
    25.1425

```

```

Percent error in A and B for Beta = 5.000000
    16.9592

```

```

Percent error in A and B for Beta = 10.000000
     9.4441

```

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Percent error in A and B for Beta = 50.000000
     2.4046

```

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Percent error in A and B for Beta = 100.000000
     1.4825

```

```

Percent error in A and B for Beta = 150.000000
     1.1938

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```

Percent error in A and B for Beta = 200.000000
     1.0619

```

```

Percent error in A and B for Beta = 250.000000
     0.9904

```

