```
% Q2

for x = [1, 10, 100, 1000, 10000, 100000]
  x
  f1 = func1(x);
  f2 = func2(x);
  fprintf("Solution of Eq.1 : %f \n", f1);
  fprintf("Solution of Eq.2 : %f\n", f2);
  fprintf("Difference : %f\n\n", f2-f1);
end

function f = func1(x)
  f = sqrt(x)*(sqrt(x + 1) - sqrt(x));
end

function f = func2(x)
  f = sqrt(x)/(sqrt(x + 1) + sqrt(x));
end


x =

     1

Solution of Eq.1 : 0.414214
Solution of Eq.2 : 0.414214
Difference : -0.000000


x =

    10

Solution of Eq.1 : 0.488088
Solution of Eq.2 : 0.488088
Difference : 0.000000


x =

   100

Solution of Eq.1 : 0.498756
Solution of Eq.2 : 0.498756
Difference : 0.000000


x =

        1000

Solution of Eq.1 : 0.499875
```

```
Solution of Eq.2 : 0.499875
Difference : -0.000000


x =

       10000

Solution of Eq.1 : 0.499988
Solution of Eq.2 : 0.499988
Difference : 0.000000


x =

      100000

Solution of Eq.1 : 0.499999
Solution of Eq.2 : 0.499999
Difference : 0.000000
```

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