Computing square roots with the algorithm

The table below illustrates what happens if one uses the square root algorithm on pages I.2.4 and I.2.5 of the file http://math.ucr.edu/~res/math145B2017/math145Bnotes1.2.pdf. The values in the first row are the numbers whose square roots are to be computed, and the numbers down the columns indicate the values obtained by iterating the algorithm successively. Note that a value accurate to 9 decimal places is obtained well before the tenth iteration.

2	3	5
1.5	2	3
1.416666667	1.75	2.333333333
1.414215686	1.732142857	2.238095238
1.414213562	1.73205081	2.236068896
1.414213562	1.732050808	2.236067977
1.414213562	1.732050808	2.236067977
1.414213562	1.732050808	2.236067977
1.414213562	1.732050808	2.236067977
1.414213562	1.732050808	2.236067977
1.414213562	1.732050808	2.236067977