Appendix D. A Table of Double Eigenvalues and Puiseux Series.

TABLE 1

Leading Puiseux series coefficients from $a = a^* + \sum_{k \geq 1} \alpha_k (q - q^*)^{k/2}$, the expansion about the double point q^*, given for all the double points computed by Blanch and Clemm. Both the values of the selected double point parameter q^* and its corresponding eigenvalue a^* are given. The first column, m, indicates the "type" of continued fraction according to the scheme of Blanch. The coefficients presented were computed in 32 decimal Digits in Maple and verified at that precision, then rounded to the precision shown below. This table is presented as an homage to all the great table-makers of the past. A machine-readable version of this table (containing all 32 decimals for each entry, and series coefficients up to α_6) is available at Rob Corless's GitHub page, together with the Maple Workbook used to generate them.

m	q^*	a^*	α_1	α_2	α_3
0	0.000e+00+1.469e+00i	2.089e+00-0.000e-01i	1.659e+00+1.659e+00i	0.000e-01-1.192e-01i	2.928e-01-2.928e-01i
1	1.931e+00+3.238e+00i	6.176e+00+1.232e+00i	1.924e+00+2.009e+00i	3.831e-01-1.995e-01i	1.788e-01-1.824e-01i
0	5.174e+00+5.104e+00i	1.280e+01+2.763e+00i	2.118e+00+2.234e+00i	5.765e-01-1.849e-01i	1.423e-01-1.632e-01i
1	9.688e+00+7.045e+00i	2.193e+01+4.490e+00i	2.280e+00+2.410e+00i	6.915e-01-1.625e-01i	1.281e-01-1.554e-01i
0	0.000e-01+1.647e+01i	2.732e+01+0.000e+00i	2.902e+00+2.902e+00i	0.000e-01-4.027e-01i	5.069e-02-5.069e-02i
0	1.546e+01+9.043e+00i	3.354e+01+6.363e+00i	2.423e+00+2.557e+00i	7.687e-01-1.427e-01i	1.213e-01-1.501e-01i
1	4.852e+00+2.233e+01i	3.841e+01+2.533e+00i	3.099e+00+3.146e+00i	1.773e-01-4.071e-01i	3.153e-02-5.554e-02i
1	2.247e+01+1.109e+01i	4.764e+01+8.351e+00i	2.551e+00+2.687e+00i	8.249e-01-1.266e-01i	1.174e-01-1.457e-01i
0	1.108e+01+2.834e+01i	5.203e+01+5.552e+00i	3.262e+00+3.346e+00i	3.092e-01-3.940e-01i	2.361e-02-6.270e-02i
1	3.074e+01+1.317e+01i	6.421e+01+1.043e+01i	2.668e+00+2.805e+00i	8.680e-01-1.134e-01i	1.147e-01-1.419e-01i
1	1.866e+01+3.447e+01i	6.816e+01+8.962e+00i	3.405e+00+3.517e+00i	4.101e-01-3.746e-01i	2.123e-02-6.892e-02i
1	4.024e+01+1.530e+01i	8.326e+01+1.260e+01i	2.777e+00+2.912e+00i	9.026e-01-1.027e-01i	1.128e-01-1.385e-01i
0	0.000e+00+4.781e+01i	8.066e+01-0.000e-01i	3.765e+00+3.765e+00i	0.000e-01-4.496e-01i	2.233e-02-2.233e-02i
0	2.755e+01+4.072e+01i	8.679e+01+1.270e+01i	3.533e+00+3.668e+00i	4.895e-01-3.538e-01i	2.151e-02-7.368e-02i
0	5.098e+01+1.745e+01i	1.048e+02+1.484e+01i	2.878e+00+3.012e+00i	9.311e-01-9.371e-02i	1.112e-01-1.354e-01i
1	7.754e+00+5.776e+01i	9.877e+01+3.830e+00i	3.925e+00+3.961e+00i	1.141e-01-4.507e-01i	1.311e-02-2.774e-02i
1	3.773e+01+4.707e+01i	1.079e+02+1.672e+01i	3.651e+00+3.803e+00i	5.534e-01-3.333e-01i	2.303e-02-7.711e-02i
1	6.296e+01+1.962e+01i	1.288e+02+1.714e+01i	2.974e+00+3.105e+00i	9.552e-01-8.618e-02i	1.098e-01-1.326e-01i
0	1.691e+01+6.785e+01i	1.194e+02+8.203e+00i	4.066e+00+4.133e+00i	2.087e-01-4.439e-01i	7.973e-03-3.352e-02i
0	4.921e+01+5.353e+01i	1.316e+02+2.099e+01i	3.761e+00+3.926e+00i	6.061e-01-3.141e-01i	2.507e-02-7.950e-02i
0	7.618e+01+2.183e+01i	1.553e+02+1.949e+01i	3.064e+00+3.194e+00i	9.759e-01-7.976e-02i	1.086e-01-1.300e-01i
1	2.744e+01+7.809e+01i	1.425e+02+1.304e+01i	4.194e+00+4.288e+00i	2.882e-01-4.329e-01i	5.451e-03-3.887e-02i
1	6.196e+01+6.008e+01i	1.577e+02+2.548e+01i	3.864e+00+4.040e+00i	6.503e-01-2.964e-01i	2.726e-02-8.111e-02i
1	9.064e+01+2.405e+01i	1.842e+02+2.190e+01i	3.149e+00+3.277e+00i	9.941e-01-7.423e-02i	1.075e-01-1.276e-01i
0	0.000e-01+9.548e+01i	1.621e+02+0.000e+00i	4.465e+00+4.465e+00i	0.000e-01-4.687e-01i	1.290e-02-1.290e-02i
0	3.932e+01+8.847e+01i	1.682e+02+1.829e+01i	4.311e+00+4.429e+00i	3.555e-01-4.197e-01i	4.580e-03-4.353e-02i
0	7.598e+01+6.671e+01i	1.863e+02+3.017e+01i	3.962e+00+4.146e+00i	6.951e-01-2.801e-01i	2.942e-02-8.214e-02i
0	1.063e+02+2.630e+01i	2.156e+02+2.436e+01i	3.231e+00+3.357e+00i	1.010e+00-6.942e-02i	1.064e-01-1.254e-01i
1	1.065e+01+1.095e+02i	1.872e+02+5.128e+00i	4.603e+00+4.633e+00i	8.400e-02-4.691e-01i	7.185e-03-1.703e-02i
1	5.253e+01+9.897e+01i	1.964e+02+2.391e+01i	4.420e+00+4.558e+00i	4.132e-01-4.056e-01i	4.740e-03-4.747e-02i
1	9.127e+01+7.342e+01i	2.174e+02+3.504e+01i	4.054e+00+4.246e+00i	7.203e-01-2.654e-01i	3.147e-02-8.273e-02i
1	1.233e+02+2.854e+01i	2.495e+02+2.686e+01i	3.309e+00+3.433e+00i	1.024e+00-6.519e-02i	1.054e-01-1.234e-01i
0	2.272e+01+1.237e+02i	2.149e+02+1.082e+01i	4.729e+00+4.786e+00i	1.573e-01-4.651e-01i	3.469e-03-2.127e-02i
0	6.706e+01+1.096e+02i	2.270e+02+2.986e+01i	4.522e+00+4.678e+00i	4.632e-01-3.912e-01i	5.532e-03-5.075e-02i
0	1.078e+02+8.020e+01i	2.510e+02+4.008e+01i	4.143e+00+4.340e+00i	7.486e-01-2.519e-01i	3.336e-02-8.302e-02i
0	1.414e+02+3.085e+01i	2.859e+02+2.939e+01i	3.384e+00+3.506e+00i	1.037e+00-6.146e-02i	1.045e-01-1.215e-01i
1	3.618e+01+1.380e+02i	2.451e+02+1.703e+01i	4.845e+00+4.927e+00i	2.216e-01-4.582e-01i	1.195e-03-2.532e-02i
1	8.289e+01+1.257e+02i	2.602e+02+3.612e+01i	4.619e+00+4.790e+00i	5.069e-01-3.771e-01i	6.700e-03-5.344e-02i
1	1.256e+02+8.705e+01i	2.871e+02+4.528e+01i	4.228e+00+4.429e+00i	7.736e-01-2.397e-01i	3.509e-02-8.306e-02i
1	1.608e+02+3.314e+01i	3.247e+02+3.197e+01i	3.457e+00+3.577e+00i	1.049e+00-5.813e-02i	1.036e-01-1.197e-01i
2	0.000e-01+6.929e+00i	1.119e+01+0.000e+00i	2.359e+00+2.359e+00i	0.000e-01-3.396e-01i	9.681e-02-9.681e-02i
3	3.397e+00+1.075e+01i	1.877e+01+1.884e+00i	2.585e+00+2.644e+00i	2.442e-01-3.528e-01i	6.169e-02-9.150e-02i
2	8.152e+00+1.469e+01i	2.889e+01+4.195e+00i	2.762e+00+2.860e+00i	4.050e-01-3.341e-01i	4.995e-02-9.596e-02i
3	1.422e+01+1.875e+01i	4.152e+01+6.826e+00i	2.914e+00+3.038e+00i	5.175e-01-3.086e-01i	4.711e-02-1.000e-01i
2	0.000e+00+3.010e+01i	5.048e+01+0.000e+00i	3.361e+00+3.361e+00i	0.000e-01-4.324e-01i	3.199e-02-3.199e-02i
2	2.158e+01+2.291e+01i	5.665e+01+9.716e+00i	3.050e+00+3.191e+00i	6.003e-01-2.835e-01i	4.761e-02-1.025e-01i
3	6.304e+00+3.800e+01i	6.507e+01+3.182e+00i	3.536e+00+3.577e+00i	1.389e-01-4.344e-01i	1.931e-02-3.785e-02i
3	3.021e+01+2.716e+01i	7.427e+01+1.282e+01i	3.173e+00+3.326e+00i	6.639e-01-2.608e-01i	4.929e-02-1.037e-01i
2	1.400e+01+4.605e+01i	8.220e+01+6.883e+00i	3.688e+00+3.762e+00i	2.494e-01-4.252e-01i	1.308e-02-4.453e-02i
2	4.011e+01+3.148e+01i	9.438e+01+1.611e+01i	3.287e+00+3.449e+00i	7.155e-01-2.407e-01i	5.127e-02-1.040e-01i
3	2.306e+01+5.424e+01i	1.018e+02+1.102e+01i	3.822e+00+3.925e+00i	3.387e-01-4.107e-01i	1.057e-02-5.056e-02i
3	5.127e+01+3.587e+01i	1.170e+02+1.957e+01i	3.393e+00+3.562e+00i	7.558e-01-2.231e-01i	5.321e-02-1.038e-01i
2	0.000e-01+6.960e+01i	1.179e+02+0.000e+00i	4.129e+00+4.129e+00i	0.000e-01-4.608e-01i	1.661e-02-1.661e-02i
2	3.345e+01+6.256e+01i	1.240e+02+1.553e+01i	3.945e+00+4.071e+00i	4.121e-01-3.941e-01i	1.016e-02-5.556e-02i
2	6.369e+01+4.032e+01i	1.421e+02+2.316e+01i	3.494e+00+3.666e+00i	7.903e-01-2.077e-01i	5.498e-02-1.032e-01i
3	9.204e+00+8.159e+01i	1.395e+02+4.479e+00i	4.277e+00+4.310e+00i	9.677e-02-4.614e-01i	9.490e-03-2.135e-02i
3	4.516e+01+7.100e+01i	1.486e+02+2.038e+01i	4.058e+00+4.203e+00i	4.735e-01-3.770e-01i	1.092e-02-5.956e-02i
3	7.735e+01+4.484e+01i	1.696e+02+2.690e+01i	3.589e+00+3.764e+00i	8.196e-01-1.942e-01i	5.654e-02-1.024e-01i
2	1.982e+01+9.373e+01i	1.636e+02+9.516e+00i	4.410e+00+4.472e+00i	1.794e-01-4.563e-01i	5.159e-03-2.629e-02i
2	5.817e+01+7.955e+01i	1.758e+02+2.552e+01i	4.164e+00+4.325e+00i	5.254e-01-3.602e-01i	1.232e-02-6.269e-02i
2	9.227e+01+4.940e+01i	1.997e+02+3.074e+01i	3.679e+00+3.857e+00i	8.450e-01-1.823e-01i	5.790e-02-1.014e-01i
3	3.182e+01+1.060e+02i	1.903e+02+1.504e+01i	4.532e+00+4.620e+00i	2.506e-01-4.477e-01i	2.738e-03-3.095e-02i
3	7.247e+01+8.821e+01i	2.054e+02+3.093e+01i	4.264e+00+4.439e+00i	5.700e-01-3.441e-01i	1.402e-02-6.511e-02i
3	1.084e+02+5.402e+01i	2.322e+02+3.470e+01i	3.766e+00+3.945e+00i	8.671e-01-1.717e-01i	5.906e-02-1.004e-01i
0	0.000e+00+1.254e+02i	2.134e+02+0.000e+00i	4.777e+00+4.777e+00i	0.000e-01-4.745e-01i	1.034e-02-1.034e-02i
2	4.517e+01+1.185e+02i	2.195e+02+2.101e+01i	4.644e+00+4.755e+00i	3.124e-01-4.370e-01i	1.616e-03-3.514e-02i
2	8.806e+01+9.696e+01i	2.376e+02+3.658e+01i	4.359e+00+4.545e+00i	6.086e-01-3.289e-01i	1.585e-02-6.696e-02i
2	1.258e+02+5.868e+01i	2.672e+02+3.876e+01i	3.849e+00+4.029e+00i	8.867e-01-1.622e-01i	6.006e-02-9.934e-02i
3	1.210e+01+1.415e+02i	2.420e+02+5.776e+00i	4.907e+00+4.935e+00i	7.420e-02-4.748e-01i	5.618e-03-1.394e-02i
3	5.987e+01+1.310e+02i	2.511e+02+2.737e+01i	4.750e+00+4.881e+00i	3.663e-01-4.253e-01i	1.370e-03-3.881e-02i
3	1.049e+02+1.058e+02i	2.722e+02+4.245e+01i	4.449e+00+4.645e+00i	6.424e-01-3.147e-01i	1.769e-02-6.834e-02i
3	1.445e+02+6.338e+01i	3.046e+02+4.292e+01i	3.928e+00+4.109e+00i	9.043e-01-1.537e-01i	6.090e-02-9.827e-02i