Some interesting sequences.

$$a_1 = 2.0$$
$$a_{n+1} = a_n/2 + 1/a_n$$

$$a_1 = 2.000000000000$$
$$a_2 = 1.500000000000$$
$$a_3 = 1.416666666667$$
$$a_4 = 1.414215686275$$
$$a_5 = 1.414213562375$$
$$a_6 = 1.414213562373$$
$$a_7 = 1.414213562373$$
$$a_8 = 1.414213562373$$
$$a_9 = 1.414213562373$$
$$a_{10} = 1.414213562373$$
$$a_{11} = 1.414213562373$$
$$a_{12} = 1.414213562373$$
$$a_{13} = 1.414213562373$$
$$a_{14} = 1.414213562373$$
$$a_{15} = 1.414213562373$$
$$a_{16} = 1.414213562373$$
$$a_{17} = 1.414213562373$$
$$a_{18} = 1.414213562373$$
$$a_{19} = 1.414213562373$$
$$a_{20} = 1.414213562373$$
$$a_{21} = 1.414213562373$$
$$a_{22} = 1.414213562373$$
$$a_{23} = 1.414213562373$$
$$a_{24} = 1.414213562373$$
$$a_{25} = 1.414213562373$$
$$a_{26} = 1.414213562373$$
$$a_{27} = 1.414213562373$$
$$a_{28} = 1.414213562373$$
$$a_{29} = 1.414213562373$$
$$a_{30} = 1.414213562373$$
$$a_{31} = 1.414213562373$$
$$a_{32} = 1.414213562373$$
$$a_{33} = 1.414213562373$$
$$a_{34} = 1.414213562373$$
$$a_{35} = 1.414213562373$$
$$a_{36} = 1.414213562373$$
$$a_{37} = 1.414213562373$$
$$a_{38} = 1.414213562373$$
$$a_{39} = 1.414213562373$$
$$a_{40} = 1.414213562373$$

$$b_1 = 0.3$$
$$b_{n+1} = b_n\,(1 - b_n)$$

$$b_1 = 0.300000000000$$
$$b_2 = 0.210000000000$$
$$b_3 = 0.165900000000$$
$$b_4 = 0.138377190000$$
$$b_5 = 0.119228943288$$
$$b_6 = 0.105013402370$$
$$b_7 = 0.093985587693$$
$$b_8 = 0.085152296999$$
$$b_9 = 0.077901383315$$
$$b_{10} = 0.071832757792$$
$$b_{11} = 0.066672812700$$
$$b_{12} = 0.062227548747$$
$$b_{13} = 0.058355280924$$
$$b_{14} = 0.054949942112$$
$$b_{15} = 0.051930445974$$
$$b_{16} = 0.049233674755$$
$$b_{17} = 0.046809720025$$
$$b_{18} = 0.044618570136$$
$$b_{19} = 0.042627753335$$
$$b_{20} = 0.040810627981$$
$$b_{21} = 0.039145120625$$
$$b_{22} = 0.037612780156$$
$$b_{23} = 0.036198058925$$
$$b_{24} = 0.034887759455$$
$$b_{25} = 0.033670603695$$
$$b_{26} = 0.032536894142$$
$$b_{27} = 0.031478244662$$
$$b_{28} = 0.030487364775$$
$$b_{29} = 0.029557885364$$
$$b_{30} = 0.028684216777$$
$$b_{31} = 0.027861432484$$
$$b_{32} = 0.027085173064$$
$$b_{33} = 0.026351566464$$
$$b_{34} = 0.025657161409$$
$$b_{35} = 0.024998871478$$
$$b_{36} = 0.024373927903$$
$$b_{37} = 0.023779839541$$
$$b_{38} = 0.023214358773$$
$$b_{39} = 0.022675452319$$
$$b_{40} = 0.022161276181$$

$$c_1 = 0.3$$
$$c_{n+1} = 3.5\,c_n\,(1 - c_n)$$

$$c_1 = 0.300000000000$$
$$c_2 = 0.735000000000$$
$$c_3 = 0.681712500000$$
$$c_4 = 0.759431985703$$
$$c_5 = 0.639432656779$$
$$c_6 = 0.806954869782$$
$$c_7 = 0.545225477710$$
$$c_8 = 0.867841296581$$
$$c_9 = 0.401424731854$$
$$c_{10} = 0.840990207785$$
$$c_{11} = 0.468039873681$$
$$c_{12} = 0.871424926140$$
$$c_{13} = 0.392152334847$$
$$c_{14} = 0.834291083924$$
$$c_{15} = 0.483873149232$$
$$c_{16} = 0.874089736395$$
$$c_{17} = 0.385199041933$$
$$c_{18} = 0.828872590095$$
$$c_{19} = 0.496449868196$$
$$c_{20} = 0.874955887975$$
$$c_{21} = 0.382928287256$$
$$c_{22} = 0.827029749263$$
$$c_{23} = 0.500680400839$$
$$c_{24} = 0.874998379691$$
$$c_{25} = 0.382816753301$$
$$c_{26} = 0.826938303426$$
$$c_{27} = 0.500889710136$$
$$c_{28} = 0.874997229456$$
$$c_{29} = 0.382819772652$$
$$c_{30} = 0.826940780116$$
$$c_{31} = 0.500884042041$$
$$c_{32} = 0.874997264644$$
$$c_{33} = 0.382819680284$$
$$c_{34} = 0.826940704349$$
$$c_{35} = 0.500884215439$$
$$c_{36} = 0.874997263571$$
$$c_{37} = 0.382819683101$$
$$c_{38} = 0.826940706660$$
$$c_{39} = 0.500884210151$$
$$c_{40} = 0.874997263603$$

$$d_1 = 27$$
$$d_{n+1} = \begin{cases} d_n/2 & \text{if } d_n \text{ even,} \\ 3\,d_n + 1 & \text{if } d_n \text{ odd.} \end{cases}$$

$$d_1 = 27$$
$$d_2 = 82$$
$$d_3 = 41$$
$$d_4 = 124$$
$$d_5 = 62$$
$$d_6 = 31$$
$$d_7 = 94$$
$$d_8 = 47$$
$$d_9 = 142$$
$$d_{10} = 71$$
$$d_{11} = 214$$
$$d_{12} = 107$$
$$d_{13} = 322$$
$$d_{14} = 161$$
$$d_{15} = 484$$
$$d_{16} = 242$$
$$d_{17} = 121$$
$$d_{18} = 364$$
$$d_{19} = 182$$
$$d_{20} = 91$$
$$d_{21} = 274$$
$$d_{22} = 137$$
$$d_{23} = 412$$
$$d_{24} = 206$$
$$d_{25} = 103$$
$$\vdots$$
$$d_{65} = 1619$$
$$d_{66} = 4858$$
$$d_{67} = 2429$$
$$d_{68} = 7288$$
$$d_{69} = 3644$$
$$d_{70} = 1822$$
$$\vdots$$
$$d_{106} = 10$$
$$d_{107} = 5$$
$$d_{108} = 16$$
$$d_{109} = 8$$
$$d_{110} = 4$$
$$d_{111} = 2$$
$$d_{112} = 1$$