

Some interesting sequences.

$a_1 = 2.0$ $a_{n+1} = a_n/2 + 1/a_n$	$b_1 = 0.3$ $b_{n+1} = b_n(1 - b_n)$	$c_1 = 0.3$ $c_{n+1} = 3.5 c_n(1 - c_n)$	$d_1 = 27$ $d_{n+1} = \begin{cases} d_n/2 & \text{if } d_n \text{ even,} \\ 3d_n + 1 & \text{if } d_n \text{ odd.} \end{cases}$
$a_1 = 2.000000000000$	$b_1 = 0.300000000000$	$c_1 = 0.300000000000$	$d_1 = 27$
$a_2 = 1.500000000000$	$b_2 = 0.210000000000$	$c_2 = 0.735000000000$	$d_2 = 82$
$a_3 = 1.416666666667$	$b_3 = 0.165900000000$	$c_3 = 0.681712500000$	$d_3 = 41$
$a_4 = 1.414215686275$	$b_4 = 0.138377190000$	$c_4 = 0.759431985703$	$d_4 = 124$
$a_5 = 1.414213562375$	$b_5 = 0.119228943288$	$c_5 = 0.639432656779$	$d_5 = 62$
$a_6 = 1.414213562373$	$b_6 = 0.105013402370$	$c_6 = 0.806954869782$	$d_6 = 31$
$a_7 = 1.414213562373$	$b_7 = 0.093985587693$	$c_7 = 0.545225477710$	$d_7 = 94$
$a_8 = 1.414213562373$	$b_8 = 0.085152296999$	$c_8 = 0.867841296581$	$d_8 = 47$
$a_9 = 1.414213562373$	$b_9 = 0.077901383315$	$c_9 = 0.401424731854$	$d_9 = 142$
$a_{10} = 1.414213562373$	$b_{10} = 0.071832757792$	$c_{10} = 0.840990207785$	$d_{10} = 71$
$a_{11} = 1.414213562373$	$b_{11} = 0.066672812700$	$c_{11} = 0.468039873681$	$d_{11} = 214$
$a_{12} = 1.414213562373$	$b_{12} = 0.062227548747$	$c_{12} = 0.871424926140$	$d_{12} = 107$
$a_{13} = 1.414213562373$	$b_{13} = 0.058355280924$	$c_{13} = 0.392152334847$	$d_{13} = 322$
$a_{14} = 1.414213562373$	$b_{14} = 0.054949942112$	$c_{14} = 0.834291083924$	$d_{14} = 161$
$a_{15} = 1.414213562373$	$b_{15} = 0.051930445974$	$c_{15} = 0.483873149232$	$d_{15} = 484$
$a_{16} = 1.414213562373$	$b_{16} = 0.049233674755$	$c_{16} = 0.874089736395$	$d_{16} = 242$
$a_{17} = 1.414213562373$	$b_{17} = 0.046809720025$	$c_{17} = 0.385199041933$	$d_{17} = 121$
$a_{18} = 1.414213562373$	$b_{18} = 0.044618570136$	$c_{18} = 0.828872590095$	$d_{18} = 364$
$a_{19} = 1.414213562373$	$b_{19} = 0.042627753335$	$c_{19} = 0.496449868196$	$d_{19} = 182$
$a_{20} = 1.414213562373$	$b_{20} = 0.040810627981$	$c_{20} = 0.874955887975$	$d_{20} = 91$
$a_{21} = 1.414213562373$	$b_{21} = 0.039145120625$	$c_{21} = 0.382928287256$	$d_{21} = 274$
$a_{22} = 1.414213562373$	$b_{22} = 0.037612780156$	$c_{22} = 0.827029749263$	$d_{22} = 137$
$a_{23} = 1.414213562373$	$b_{23} = 0.036198058925$	$c_{23} = 0.500680400839$	$d_{23} = 412$
$a_{24} = 1.414213562373$	$b_{24} = 0.034887759455$	$c_{24} = 0.874998379691$	$d_{24} = 206$
$a_{25} = 1.414213562373$	$b_{25} = 0.033670603695$	$c_{25} = 0.382816753301$	$d_{25} = 103$
$a_{26} = 1.414213562373$	$b_{26} = 0.032536894142$	$c_{26} = 0.826938303426$	\vdots
$a_{27} = 1.414213562373$	$b_{27} = 0.031478244662$	$c_{27} = 0.500889710136$	$d_{65} = 1619$
$a_{28} = 1.414213562373$	$b_{28} = 0.030487364775$	$c_{28} = 0.874997229456$	$d_{66} = 4858$
$a_{29} = 1.414213562373$	$b_{29} = 0.029557885364$	$c_{29} = 0.382819772652$	$d_{67} = 2429$
$a_{30} = 1.414213562373$	$b_{30} = 0.028684216777$	$c_{30} = 0.826940780116$	$d_{68} = 7288$
$a_{31} = 1.414213562373$	$b_{31} = 0.027861432484$	$c_{31} = 0.500884042041$	$d_{69} = 3644$
$a_{32} = 1.414213562373$	$b_{32} = 0.027085173064$	$c_{32} = 0.874997264644$	$d_{70} = 1822$
$a_{33} = 1.414213562373$	$b_{33} = 0.026351566464$	$c_{33} = 0.382819680284$	\vdots
$a_{34} = 1.414213562373$	$b_{34} = 0.025657161409$	$c_{34} = 0.826940704349$	$d_{106} = 10$
$a_{35} = 1.414213562373$	$b_{35} = 0.024998871478$	$c_{35} = 0.500884215439$	$d_{107} = 5$
$a_{36} = 1.414213562373$	$b_{36} = 0.024373927903$	$c_{36} = 0.874997263571$	$d_{108} = 16$
$a_{37} = 1.414213562373$	$b_{37} = 0.023779839541$	$c_{37} = 0.382819683101$	$d_{109} = 8$
$a_{38} = 1.414213562373$	$b_{38} = 0.023214358773$	$c_{38} = 0.826940706660$	$d_{110} = 4$
$a_{39} = 1.414213562373$	$b_{39} = 0.022675452319$	$c_{39} = 0.500884210151$	$d_{111} = 2$
$a_{40} = 1.414213562373$	$b_{40} = 0.022161276181$	$c_{40} = 0.874997263603$	$d_{112} = 1$