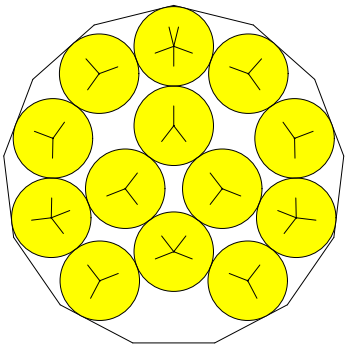
N = 13

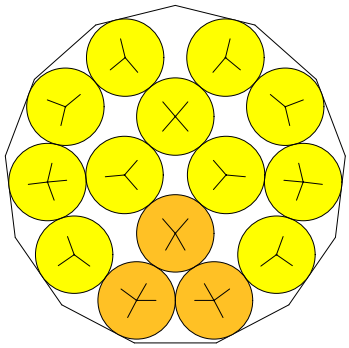
13 circles in a tridecagon



radius = 0.232022716624 density = 0.727857824970
ratio = 4.309922815097 contacts = 27

N = 14

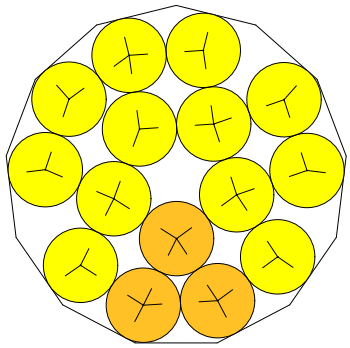
14 circles in a tridecagon



radius = 0.225977211465 density = 0.743531743088
ratio = 4.425224975186 contacts = 29

N = 15

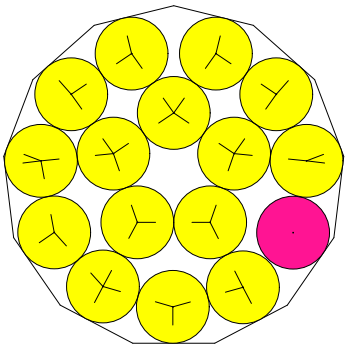
15 circles in a tridecagon



radius = 0.217182881887 density = 0.735842098211
ratio = 4.604414451596 contacts = 31

N = 16

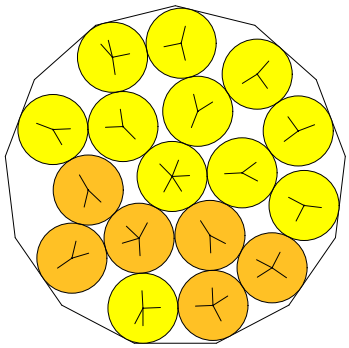
16 circles in a tridecagon



radius = 0.212526386682 density = 0.751601932239
ratio = 4.705298083744 contacts = 31

N = 17

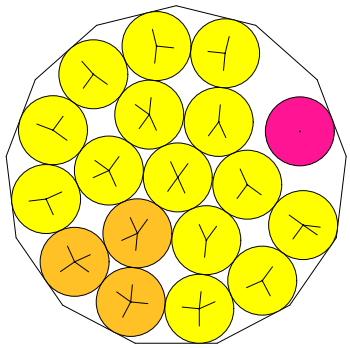
17 circles in a tridecagon



radius = 0.204556830817 density = 0.739808101293
ratio = 4.888616997085 contacts = 35

N = 18

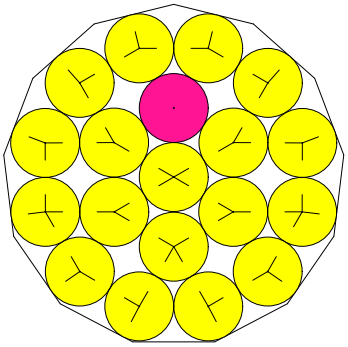
18 circles in a tridecagon



radius = 0.201313210227 density = 0.758681059493
ratio = 4.967383903282 contacts = 35

N = 19

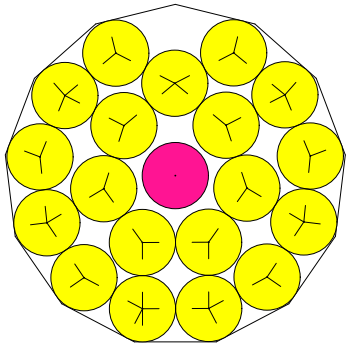
19 circles in a tridecagon



radius = 0.201215077473 density = 0.800049447442
ratio = 4.969806500373 contacts = 35

N = 20

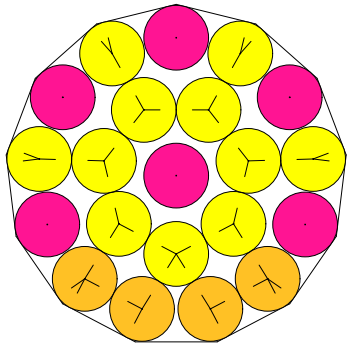
20 circles in a tridecagon



radius = 0.193410671799 density = 0.778095763546
ratio = 5.170345517632 contacts = 39

N = 21

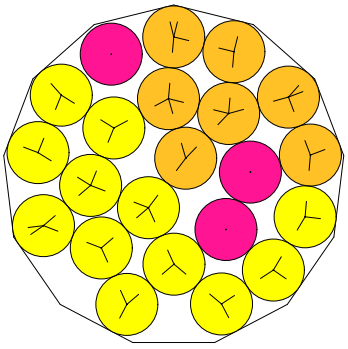
21 circles in a tridecagon



radius = 0.188968572542 density = 0.779903102247
ratio = 5.291885240735 contacts = 31

N = 22

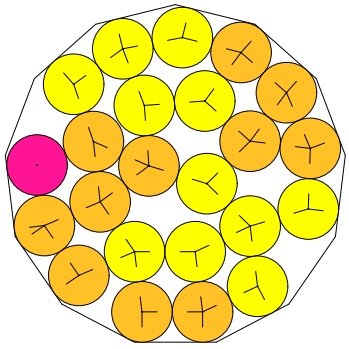
22 circles in a tridecagon



radius = 0.180958379159 density = 0.749242258480
ratio = 5.526132609326 contacts = 39

N = 23

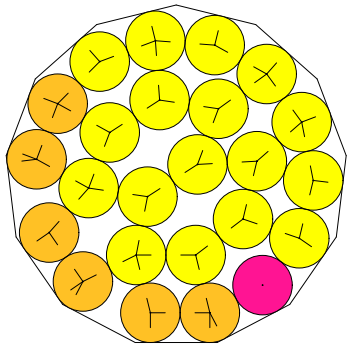
23 circles in a tridecagon



radius = 0.176958040459 density = 0.749049684184
ratio = 5.651057151210 contacts = 45

N = 24

24 circles in a tridecagon



radius = 0.173642698408 density = 0.752603930742
ratio = 5.758952199954 contacts = 47