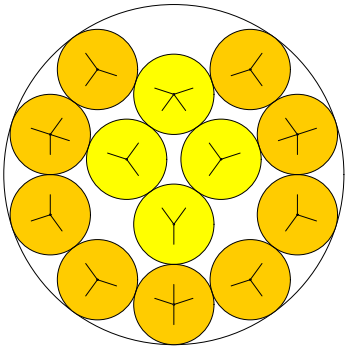
N = 13

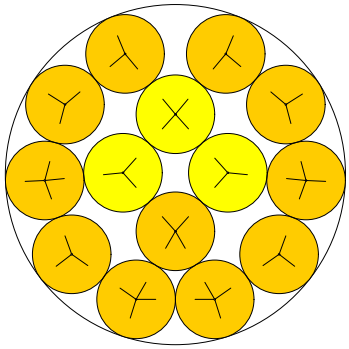
13 circles in a circle



radius = 0.236067977500 density = 0.724465170011
ratio = 4.236067977500 contacts = 26

N = 14

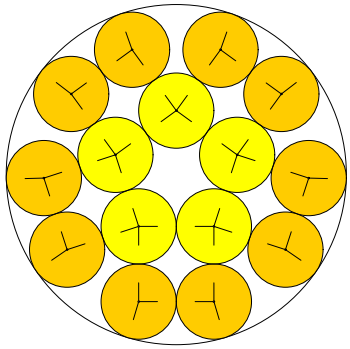
14 circles in a circle



radius = 0.231030727971 density = 0.747252761735
ratio = 4.328428554861 contacts = 29

N = 15

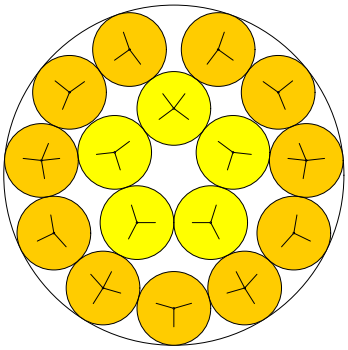
15 circles in a circle



radius = 0.221172539086 density = 0.733759380689
ratio = 4.521356964706 contacts = 30

N = 16

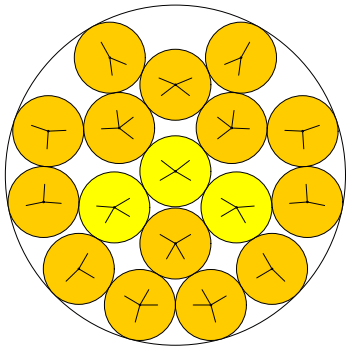
16 circles in a circle



radius = 0.216664742924 density = 0.751097773224
ratio = 4.615425594873 contacts = 32

N = 17

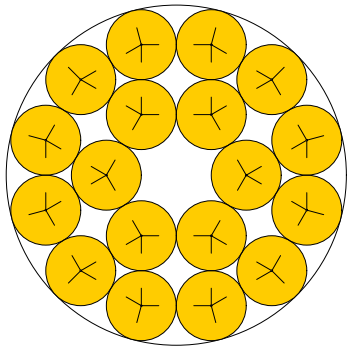
17 circles in a circle



radius = 0.208679865570 density = 0.740302447984
ratio = 4.792033748311 contacts = 35

N = 18

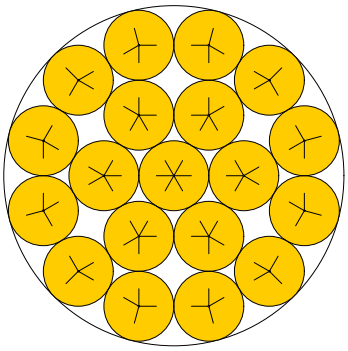
18 circles in a circle



radius = 0.205604646760 density = 0.760918873844
ratio = 4.863703305156 contacts = 42

N = 19

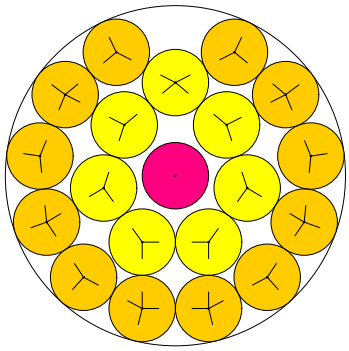
19 circles in a circle



radius = 0.205604646760 density = 0.803192144613
ratio = 4.863703305156 contacts = 48

N = 20

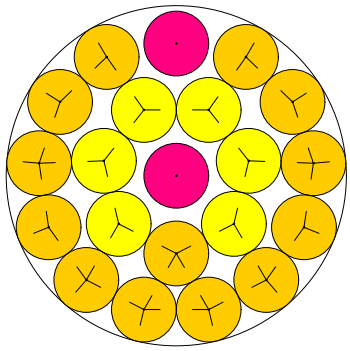
20 circles in a circle



radius = 0.195224011019 density = 0.762248289565
ratio = 5.122320736992 contacts = 38

N = 21

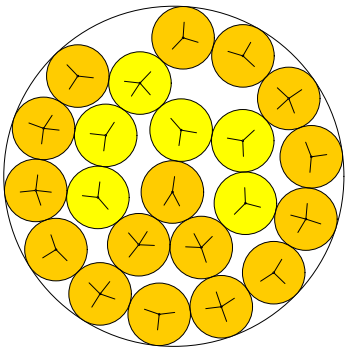
21 circles in a circle



radius = 0.190392146849 density = 0.761232561218
ratio = 5.252317475010 contacts = 38

N = 22

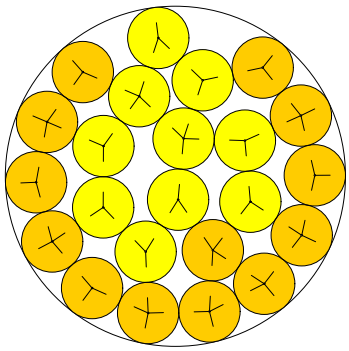
22 circles in a circle



radius = 0.183833026582 density = 0.743480796568
ratio = 5.439718959072 contacts = 44

N = 23

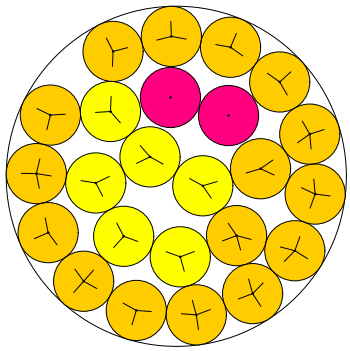
23 circles in a circle



radius = 0.180336009254 density = 0.747984753378
ratio = 5.545204222575 contacts = 46

N = 24

24 circles in a circle



radius = 0.176939130596 density = 0.751378942465
ratio = 5.651661091765 contacts = 44