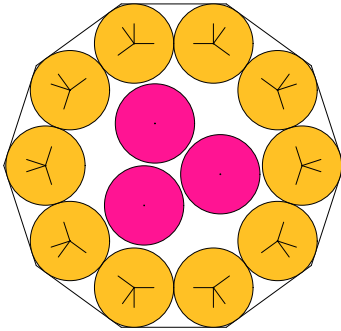
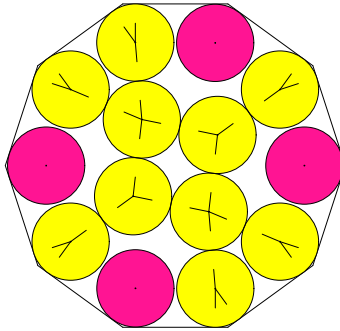


**N = 13**  
13 circles in a decagon



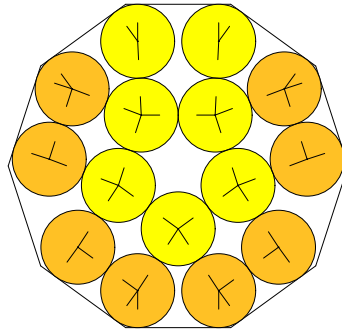
radius = 0.233234508668 density = 0.755944916409  
ratio = 4.287530201737 contacts = 30

**N = 14**  
14 circles in a decagon



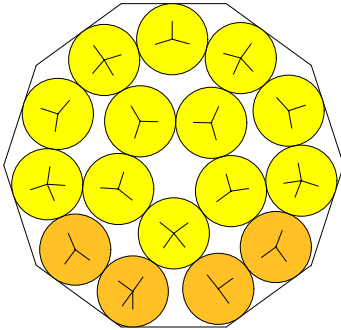
radius = 0.227176173360 density = 0.772351116056  
ratio = 4.401870078236 contacts = 22

**N = 15**  
15 circles in a decagon



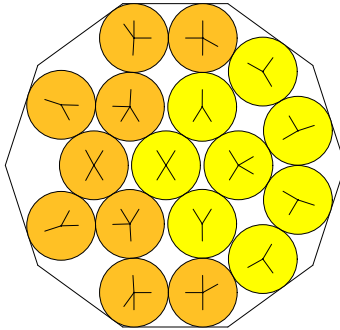
radius = 0.217430954423 density = 0.758045347398  
ratio = 4.599161157415 contacts = 35

**N = 16**  
16 circles in a decagon



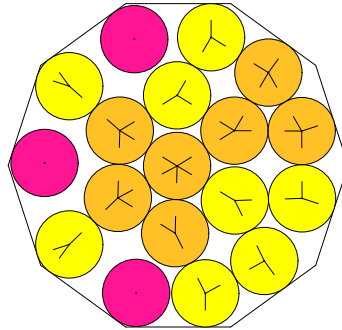
radius = 0.209167036152 density = 0.748286053443  
ratio = 4.780868048785 contacts = 33

**N = 17**  
17 circles in a decagon



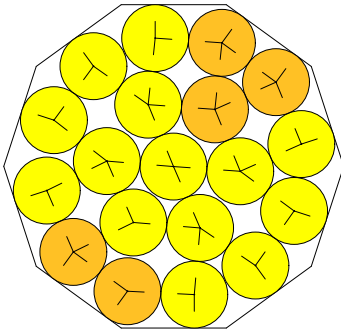
radius = 0.202348453391 density = 0.744063298308  
ratio = 4.941970068168 contacts = 36

**N = 18**  
18 circles in a decagon



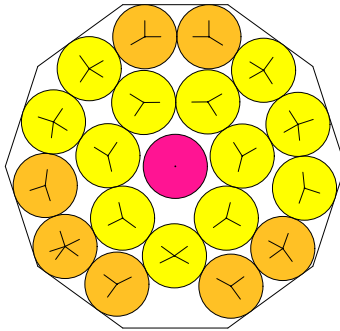
radius = 0.197916840583 density = 0.753701166192  
ratio = 5.052627139037 contacts = 31

**N = 19**  
19 circles in a decagon



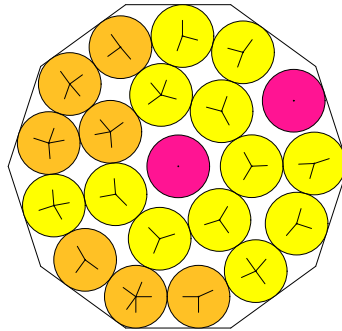
radius = 0.196742459061 density = 0.786160057086  
ratio = 5.082786932597 contacts = 39

**N = 20**  
20 circles in a decagon



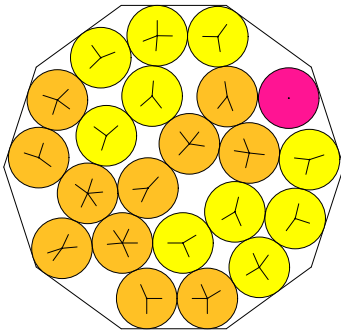
radius = 0.188578704372 density = 0.760285090570  
ratio = 5.302825699511 contacts = 39

**N = 21**  
21 circles in a decagon



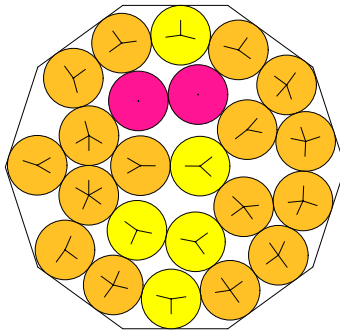
radius = 0.184347905722 density = 0.762881167739  
ratio = 5.4245259858593 contacts = 39

**N = 22**  
22 circles in a decagon



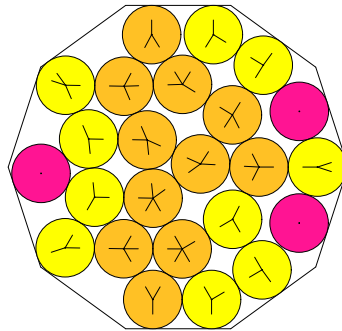
radius = 0.178203275655 density = 0.746818778254  
ratio = 5.611569127037 contacts = 43

**N = 23**  
23 circles in a decagon



radius = 0.175298553497 density = 0.755519510467  
ratio = 5.704553631804 contacts = 43

**N = 24**  
24 circles in a decagon



radius = 0.172066969621 density = 0.759593210955  
ratio = 5.811599465495 contacts = 43