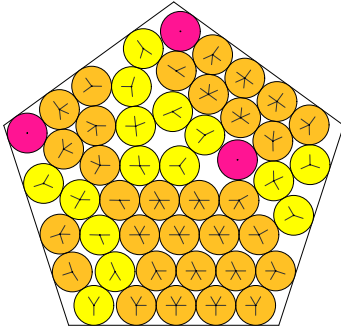


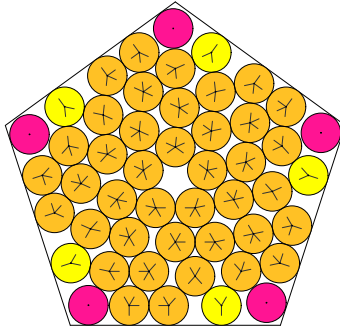
**N = 49**  
49 circles in a pentagon



radius = 0.111299134462 density = 0.802016295537  
ratio = 8.984795837217 contacts = 100

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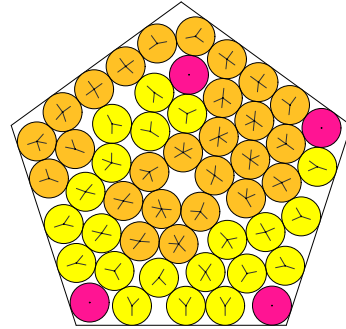
**N = 50**  
50 circles in a pentagon



radius = 0.110419276505 density = 0.805495905634  
ratio = 9.056389714297 contacts = 105

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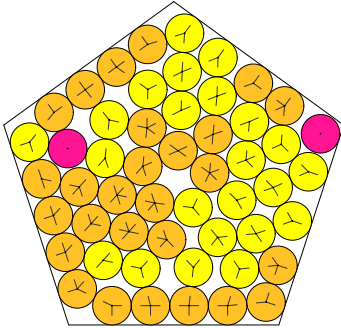
**N = 51**  
51 circles in a pentagon



radius = 0.108971323158 density = 0.800199292510  
ratio = 9.176726234205 contacts = 96

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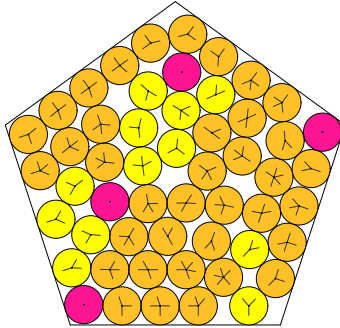
**N = 52**  
52 circles in a pentagon



radius = 0.107852412844 density = 0.799220496365  
ratio = 9.271929793972 contacts = 101

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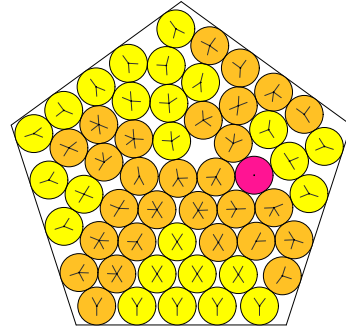
**N = 53**  
53 circles in a pentagon



radius = 0.106722276369 density = 0.797614101984  
ratio = 9.370079855779 contacts = 99

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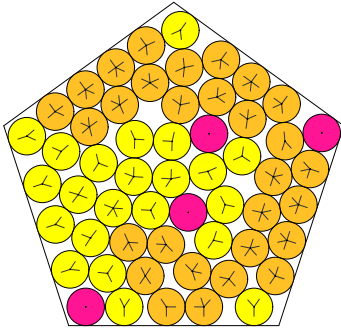
**N = 54**  
54 circles in a pentagon



radius = 0.105899776586 density = 0.800118988953  
ratio = 9.443247240251 contacts = 108

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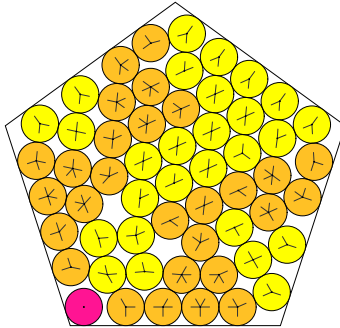
**N = 55**  
55 circles in a pentagon



radius = 0.104863207018 density = 0.799120918102  
ratio = 9.536233236013 contacts = 108

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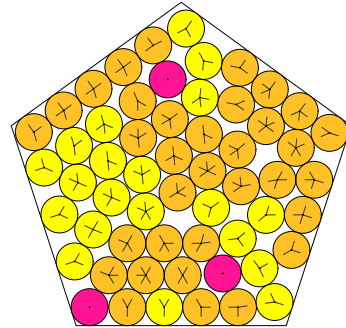
**N = 56**  
56 circles in a pentagon



radius = 0.104252745744 density = 0.804204630593  
ratio = 9.592073502367 contacts = 114

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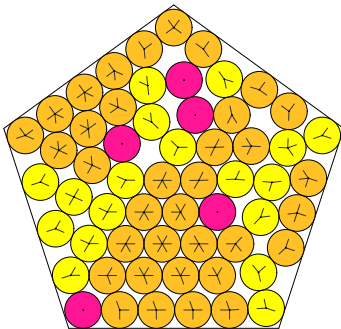
**N = 57**  
57 circles in a pentagon



radius = 0.103187535998 density = 0.801923385362  
ratio = 9.691092924434 contacts = 109

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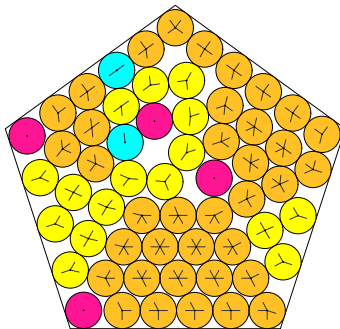
**N = 58**  
58 circles in a pentagon



radius = 0.102435670827 density = 0.804144255376  
ratio = 9.762224349454 contacts = 114

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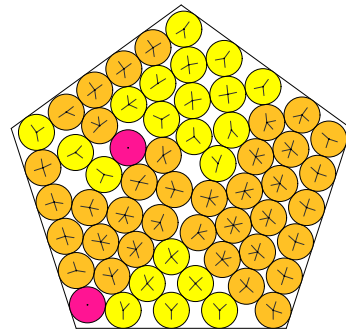
**N = 59**  
59 circles in a pentagon



radius = 0.101468332217 density = 0.802632228934  
ratio = 9.855291578714 contacts = 118

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**N = 60**  
60 circles in a pentagon



radius = 0.100739761056 density = 0.804556636832  
ratio = 9.926567122210 contacts = 125

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