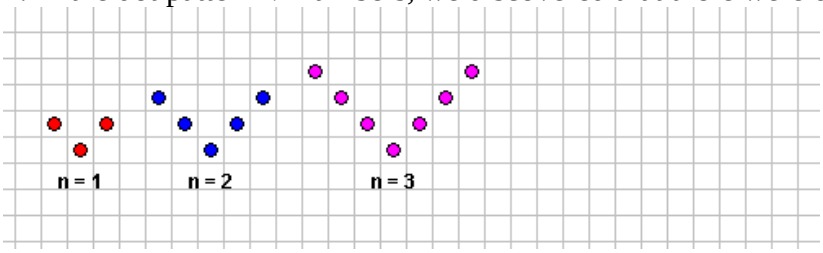
1. In the dot pattern V-numbers, we discovered that there were **d=2n+1** dots in the nth pattern.



a. At what step (n) of the pattern are there 101 dots?

b. What is the highest pattern step (n) that you could make with 84 dots?

c. What is the highest pattern step (n) that you can make with A dots?

d. What is the smallest pattern step (n) that would include at least 140 dots?

e. What is the smallest pattern step (n) that would include at least B dots?

2. At the convention, each attendee gets a badge. There are 3 badge holders left over from the previous convention, and then new packages of badge holders are opened. Badge holders come in packages of 8.

a. If there are 20 people at the convention, how many packages of badge holders will be opened?

b. If there are 100 people at the convention, how many packages of badge holders will be opened?

c. If there are 1000 people at the convention, how many packages of badge holders will be opened?

d. If there are N people at the convention, how many packages of badge holders will be opened?