Name_____ **Date** _____ **Period** _____

Algebra I, Unit 4.6 Geometric Sequences Day 2
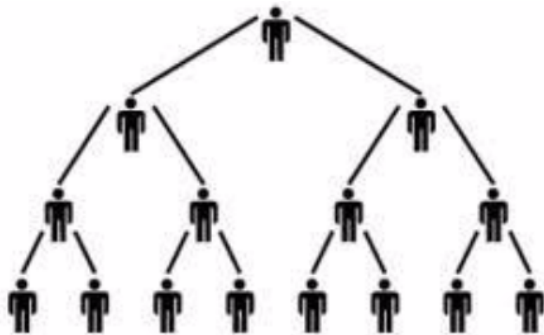
Arithmetic and Geometric Gallery Walk

1a. _____   1b. _____   1c. _____

2a. _____   2b. _____   2c. _____

3a. _____   3b. _____   3c. _____

4a. _____   4b. _____   4c. _____

5a. _____   5b. _____   5c. _____

6a. _____   6b. _____   6c. _____

7a. _____   7b. _____   7c. _____

8a. _____   8b. _____   8c. _____

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1)

Diagram 1   Diagram 2   Diagram 3
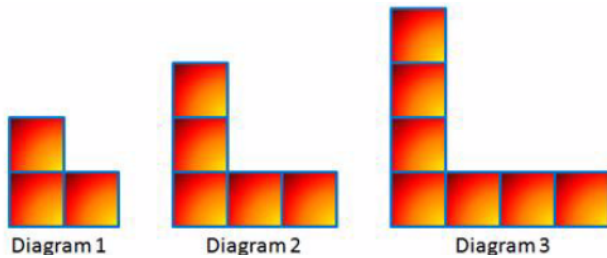
a) Write an equation for the pattern on the left.

b) Determine the number of squares in the 17th diagram

c) What does f(32) = 65 mean in terms of the diagrams?

2)

a) Write an equation for the pattern on the left.

b) Determine the number of people in the 8th tier.

c) What does f(6) = 32 mean in terms of the diagram?

3)

a) Write an equation for the pattern on the left.

b) Determine the number of stars in the 19th set.

c) What does f(21) = 84 mean in terms of the diagram?

4) Will and Jase, from Duck Commander, have agreed to donate $125 to Southern High School for the first duck caught during duck season. In addition, they will donate $18 for every additional duck that is caught during duck season. The sequence shown represents the possible dollar amounts that Duck Commander could donate for the season.

125, 143, 161, 179, ...

a) Write an equation for the pattern on the left.

b) Determine the amount of money if there are 45 ducks caught.

c) What does f(102) = 1,943 mean in terms of the scenario?

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5) During growth cells constantly increase. The mother cell divides itself into two daughter cells. Each of those daughter cells then divides into two more daughter cells, and so on. The sequence shown represents the growth of cells.

1, 2, 4, 8, 16, ...

a) Write an equation for the pattern on the left.

b) Determine the amount of cells in the 11th set.

c) What does f(15) = 16,384 mean in terms of the scenario?

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6) At the end of the first week Jason had $2200 in his savings account. At the end of the 2nd week Jason had $1100 left in his savings. At the end of the 3rd week he had $550. At the end of the 4th week he had $275.

a) Write an equation for the pattern on the left.

b) Determine the amount of money at the end of the 7th week.

c) What does f(9) = 8.59 mean in terms of the scenario?

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7) After one hour there were 58 people at the party. After two hours there were 52 people at the party. After three hours there were 46 people at the party.

a) Write an equation for the pattern on the left.

b) Determine the number of people after 8 hours.

c) What does f(10) = 4 mean in terms of the scenario?

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8) On day one there are 80 people infected with the chickenpox. On day two there are 100 people infected with the chickenpox. On day three there are 125 people infected with the chickenpox.

a) Write an equation for the pattern on the left.

b) Determine the number of people with chickenpox on day 18.

c) What does f(10) = 596 mean in terms of the scenario?