Algebra 3-4
Unit 3: Exploration Daily Work

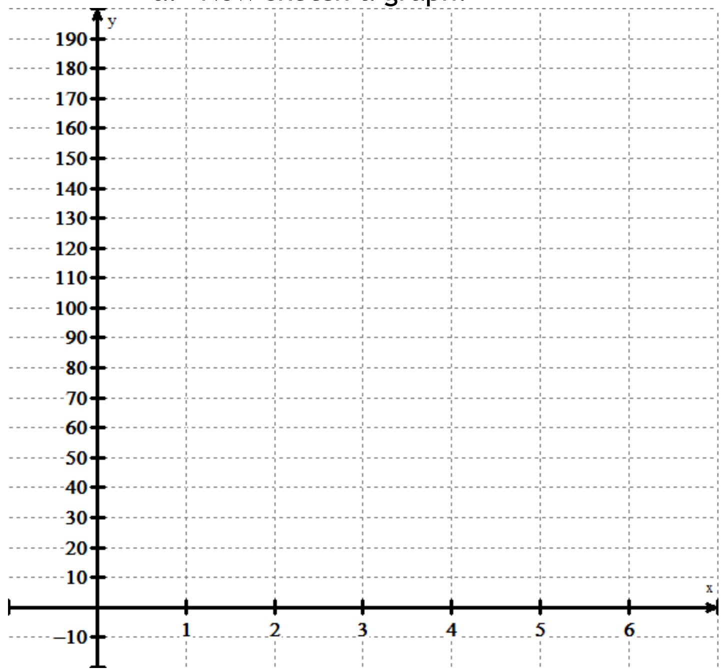
Name: ______________________________
Date: _________________ Period: ________

If a chessboard were to have wheat placed upon each square such that two grains were placed on the first square, four on the second, eight on the third, and so on (doubling the number of grains on each subsequent square), how many grains of wheat would be on the chessboard at the end?

1. Make a table for the amount of wheat doubling on each square.

x (square #)	y (# of grains of wheat)
1	2
2	4
3	8
4	
5	
6	
7	

a. Now sketch a graph.

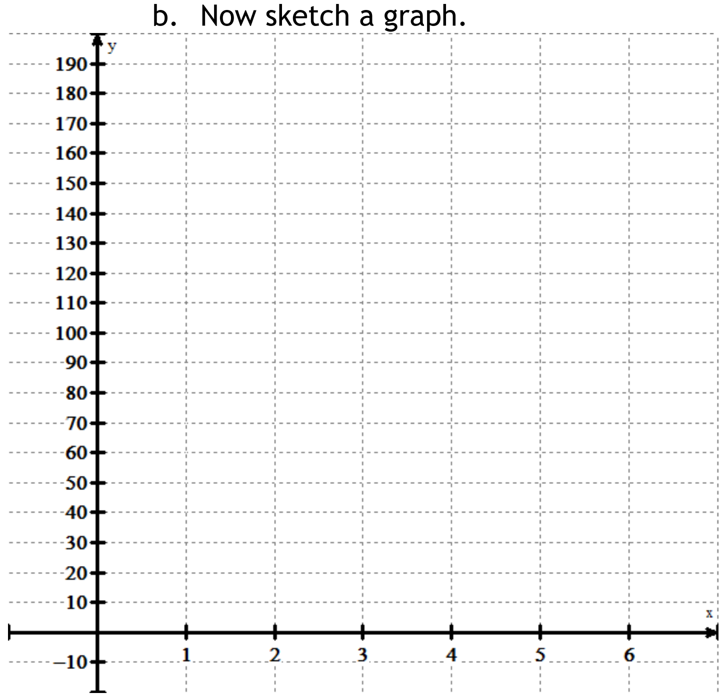


2. What would happen if we started with 3 grains of wheat and triple it?

a. Make a table for this data.

x (square #)	y (# of grains of wheat)
1	3
2	
3	
4	
5	
6	
7	

b. Now sketch a graph.

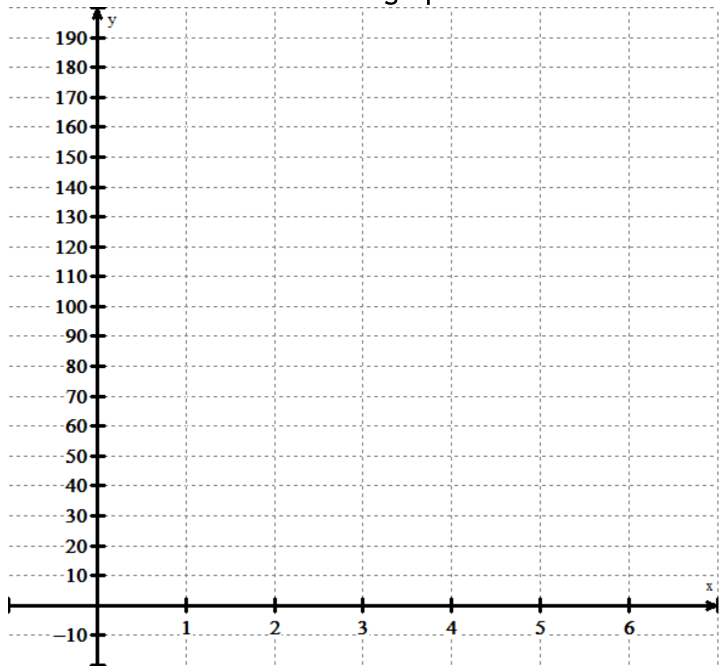


1. What would happen if we started with 4 grains of wheat and quadruple it?

    a. Make a table for this data.

x (square #)	y (# of grains of wheat)
1	4
2	
3	
4	
5	
6	
7	

    b. Now sketch a graph.



2. For each situation (doubling, tripling, quadrupling) how many grains of rice would be in square 0? Why?

3. What would happen if we started with one giant grain of wheat that we could cut in half from square to square? How small would the last piece be?

    a. Make a table.

x (square #)	y (# of grains of wheat)
1	½
2	
3	
4	
5	
6	
7	

    b. Can we graph that? How does it differ from the previous graphs?