

Sam and Landon went to the beach. They were having a contest to see who could collect the most shells. On the first day Sam found 3 shells and Landon found 5 shells. On the second day Sam found 4 shells and Landon found 6 shells. On the 4<sup>th</sup> day Landon found 8 shells and Sam found 6 shells. On the seventh day Landon found 11 shells and Sam found 9 shells. On day "x" Sam found 10 shells and Landon found 12 shells. If they both continue at this rate, how many shells will Landon find on days 10, 13, and 15? How many shells will Sam find on days 10, 13, and 15?

- 1) Draw two (function) input/output tables. One will represent Sam and one will represent Landon.
- 2) What is the rule? Determine the equation and use variables or pictures to represent the rule.
- 3) Create a coordinate grid and plot the ordered pairs for both Landon and Sam. Make sure to label the grid correctly with all key vocabulary.
- 4) Answer the following questions:
  - a. What is the relationship between the number of shells Landon finds versus the number of shells Sam finds?
  - b. How would you describe Landon's results?
  - c. How would you describe Sam's results?
  - d. Would you rather be Sam or Landon? Why?
  - e. On day 10, how many more shells will Landon have than Sam? (Hint: Don't forget to refer back to day 1-9).
  - f. Why would it be helpful to graph the results from a function/input output table?
  - g. What can you conclude from this data and graph?

① Sam

x	y
1	3
2	4
4	6
7	9
X	10

② rule: +2  
equation:  $x+2=y$

10	12
13	15
15	17

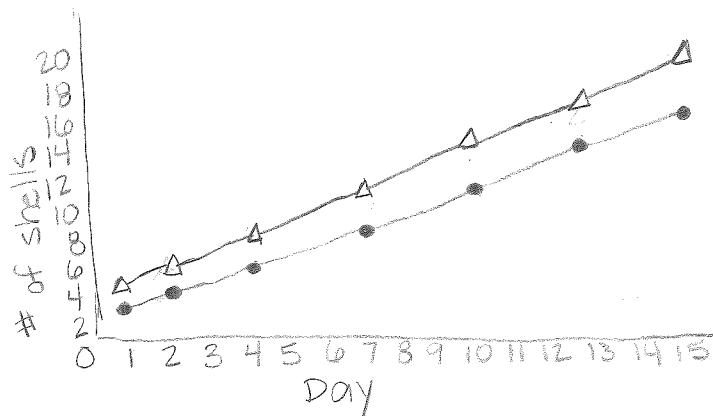
① Landon

x	y
1	5
2	6
4	8
7	11
X	12

② rule: +4  
equation:  $x+4=y$

10	14
13	17
15	19

How Many Shells Did Sam's Landon Find Each Day?



Key  
Sam •  
Landon Δ

4f. It is helpful to graph the results of a function table because it allows the audience to see the results at a quick glance and gives a big picture view.

4g. I can conclude that Sam and Landon both found a good number of shells and their shell finding followed a pattern of growth as each found one more shell than they did the day before.

- 4a. Landon and Sam both find more shells each day and increase at a steady rate. Landon continually found more shells than Sam did. Each day, each boy found one more shell than the day before.
- 4b. Landon started with finding 5 shells on day 1 and increased at a steady rate until day 15 when he found 19 shells.
- 4c. Sam started with finding 3 shells on day 1 and increased at a constant rate until day 15 when he found 17 shells.
- 4d. I would rather be Landon because he found more shells. He could have a good collection
- 4e. Landon =  $5+6+7+8+9+10+11+12+13+14=95$  shells on day 10  
Sam =  $3+4+5+6+7+8+9+10+11+12=68$  shells on day 10