The Craw and the Pitcher activity[1]

Team members 1. .... 2. ....

3. .... 4. ....

5. .... 6. ....

In this activity, you will simulate the story of "The Crow and the Pitcher" using a graduated cylinder and marbles.

Experiment: Fill your graduated cylinder with water, up to 100 mm height. You will be adding marbles (*one at a time*) until the water reaches a level of at least 120 mm—the level at which the crow can reach the water.

Question 1: Complete the first five rows of the table on the right. The water level has *not* raised enough, but can you predict how many marbles you will finally need to reach your goal of the 120mm height?

We believe that if we have a total amount of ...16.... marbles inside the graduated cylinder, then the height of the water level will be about 120mm.

Number of marbles n	Height of water level (mm) h
0	100
1	~~100.5~~ 101
2	102
3	103
4	104
5	106
6	109
7	111
8	114
10	116
11	118
12	120

Question 2: Keep adding marbles, and complete the table above. Was your prediction correct?

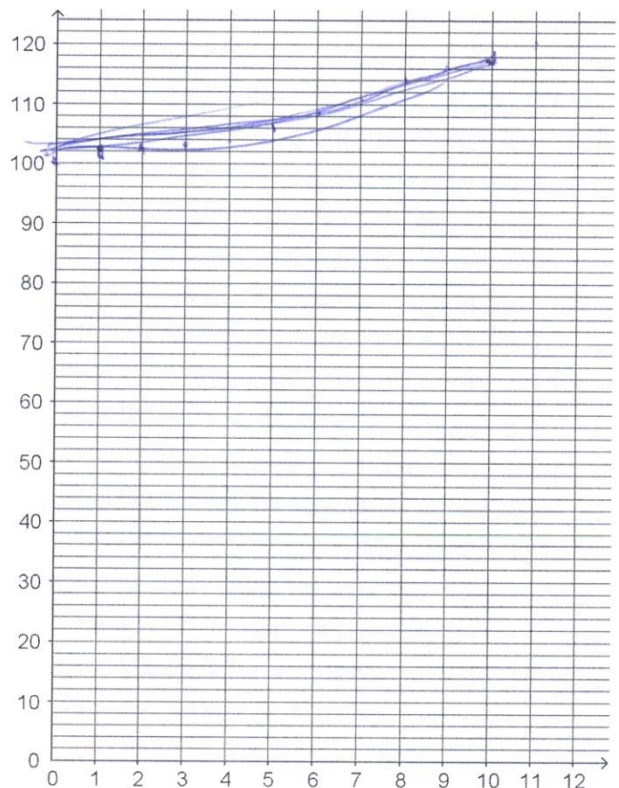Try to represent your inputs graphically. What do you notice?

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Question 3: Can you find a rule that relates the variable "h" (height of water level) to the variable "n" (number of marbles)?

Write it in the space below:

....

Figure out which of the two variables is dependent and which is independent.