

Name: _____ Date: _____

SnowDaySnowDaySnowDaySnowDay ...

The signboard repeats the words SnowDay over and over again.

- Will the 100th letter be in the word Snow or Day?
- What letter will be in the 100th place?

- Explain how you figured out your answer and how you know your answer is correct.



Challenge: Which word will be the 200th word to be printed? Use the back of this paper to explain how you figured out this answer and how you know your answer is correct.

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SnowDay = 7 letters that repeat over and over.
 $100/7 = 14 R2$. This means that the sign repeats SnowDay 14 times and then prints the first two letters of “SnowDay” to make 100 letters.

- The 100th letter will be in the word “Snow.”
- The letter “n” will be in the 100th place because this is the 2nd letter in “SnowDay.”

- I know the answer is correct because I had to figure out how many times SnowDay would be printed using 100 letters. First I figured out the SnowDay is 7 letters, then I figured out how many times 7 goes into 100 and if there is a remainder. Since there was a remainder of 2, I know that the signboard printed the 2nd letter of “SnowDay” for the 100th letter.

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ANSWER:

The signboard repeats SnowDay over and over.
Snow will be the 1st, 3rd, 5th... word.
Day will be the 2nd, 4th, 6th...word.

This means that every odd-numbered word will be Snow and every even-numbered word will be Day.

Since 200 is an even number, the 200th word to be printed on the signboard will be “Snow.”