4. Wedding Seats

The newlyweds want to make a list of who will be sitting where at the wedding ceremony. The places are divided into different sectors. **Sectors are capital letters, beginning with A**. There are a number of lines in each sector. From the console read the number of rows in **the first sector ('A')**, with **the rows increasing by 1 for each subsequent sector.** In each row there is a certain number **of places - their numbering is represented by lowercase Latin letters.** The number of places in the **odd rows is read from the console**, and the even rows **have 2 more seats**.

Input

Three lines are read from the console:

- **The last sector** – symbol (**'B'-'Z'**)
- **Rows count in the first sector** – integer (**1-100**)
- **Seats count on the odd rows** – integer (**1-24**)

Output

Print each seat on a new line in the following format:
`{sector}{row}{seat}`

At the end print the total count of all the seats.

Examples

Input	Output	Hints
B 3 2	A1a A1b A2a A2b A2c A2d A3a A3b B1a B1b B2a B2b B2c B2d B3a B3b B4a B4b B4c B4d 20	The last sector is 'B'. On the secnd line the rows count in the first sector **(A) - 3**. Then the seats count in the odd rows **- 2**. **The first symbol is the sector A** or **B**. The second symbol is the row. In 'A' sector there are 3 rows. There are **2 seats at the odd row a and b** at the even with 2 more = 4 a, b, c, d. The seats for sector A are: A1a - **odd** row – two seats firsts seat - a A1b - **second seat** - b A2a - **even row** - 4 seats, **first**- a A2b - **second** - b A2c - **third** - c A2d - **fourth** - d A3a - **odd row** – two seats first - a A3b - **second** - b Do the same for sector B. For each next sector we have one additional tow. So in sector B there are **4 rows, instad of 3.** Print all the seats for B. At the end print the total count of seats in this case - **20.**
C 4 2	A1a A1b A2a A2b A2c A2d A3a A3b A4a A4b A4c	

	A4d	
	B1a	
	B1b	
	B2a	
	B2b	
	B2c	
	B2d	
	B3a	
	B3b	
	B4a	
	B4b	
	B4c	
	B4d	
	B5a	
	B5b	
	C1a	
	C1b	
	C2a	
	C2b	
	C2c	
	C2d	
	C3a	
	C3b	
	C4a	
	C4b	
	C4c	
	C4d	
	C5a	
	C5b	
	C6a	
	C6b	
	C6c	
	C6d	
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